APPENDICES

PREPARED FOR:

KALIA PLAZA MOBILITY HUB

Alternatives Analysis

Contract Number SC-DTS-20000097

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APPENDIX A

Market Analysis Update

Honolulu
COMPLETESTREETS

ALA MOANA TRANSIT PLAZA ALTERNATIVES ANALYSIS

12/23/2020 | MARKET ANALYSIS UPDATE

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INTRODUCTION

Kimley-Horn prepared this updated market study as part of the Ala Moana Transit Center Alternatives Analysis (AA). The City and County of Honolulu is implementing the 20-mile Honolulu Rail Transit Project, which will connect 21 stations extending from East Kapolei to the Ala Moana Center (Figure 1). Construction on the corridor began in 2011. The first ten miles of the system, from East Kapolei to Aloha Stadium, is nearing completion and will begin operation in 2021. Overall, construction of the corridor is estimated at 58.8% complete. The projected completion date for the City Center Segment, which terminates at the Ala Moana Center, is in flux, dependent on adjusting the delivery method and funding.

Figure 1: Honolulu Rail Transit Project Map, 2020

Source: Honolulu Authority for Rapid Transit (HART)

The AA has an overarching goal of developing a new multimodal transportation hub in the vicinity of the Ala Moana Rail Transit Station. The alternatives analysis begins with an inventory of existing conditions, followed by the development and evaluation of transit center alternatives. A screening process will result in a locally preferred alternative (LPA) for the facility. Key objectives of the process include:

- Provide interim bus facilities during construction of the rail project to maintain operations
- Achieve long-term use as a new multimodal transit center with unique sense of place
- Enhance passenger connectivity and linkage between rail and bus systems and other modes
- Evaluate opportunities for mixed-use as part of an integrated joint development to leverage transit investment

The area around the Ala Moana Transit Center has been well studied in previous planning efforts, including a 2012 market analysis specific to the Ala Moana Station Area and a 2019 demand allocation analysis for development along the entire Honolulu Rail Transit Project. The goal of this market analysis update is two-fold:

PHASE 1:
Review previously prepared market analyses and update findings based on current conditions to inform the Ala Moana Transit Center AA based on future development opportunities.

PHASE 2:
Investigate case studies focusing on transit centers that have leveraged private development for delivery. Recommend delivery strategies based on the preferred alternative.

This first phase document presents existing conditions from a demographic and real estate market perspective, providing baseline market statistics to inform potential development opportunities. Findings presented in this document are intended to inform the Ala Moana Transit Center AA. A second phase, focusing on recommendations for project delivery, will be accomplished in a later phase following the identification of the LPA.

Geography Description

This market analysis reviews data for multiple geographies, allowing for a more comprehensive understanding of trends. Demographic and employment profiles are presented for a study area extending one-half mile from the Ala Moana Center, a distance that commonly represents a comfortable walk and is most likely to attract transit-oriented development patterns. Data for Honolulu County is also provided. Multiple sources of data were analyzed for profiles and performance trends for the various real estate sectors.

Honolulu County

Demographic, economic, and real estate data are presented for Honolulu County. The United States Census defines Honolulu County as a metropolitan region, with the City of Honolulu as the primary economic anchor. With an estimated 2020 population of over 995,000, Honolulu County is the most populous in the State of Hawaii, comprising more than two-thirds of the total population.

Study Area

The Ala Moana Study Area is defined as a one-half mile radius surrounding the planned site of the facility. The Study Area boundaries generally extend to the Pacific Ocean to the south, Ward Avenue to the west, King Boulevard to the north, and Kalakaua Avenue to the east. The Ala Moana Center, a large open-air shopping mall, lies at the heart of the Study Area. Completed in 1959, Ala Moana contains approximately 2.4 million square feet of retail space, making it the largest open-air mall in the United States. It is a major destination for both tourists and locals. The Study Area is shown in Figure 2 on the following page.

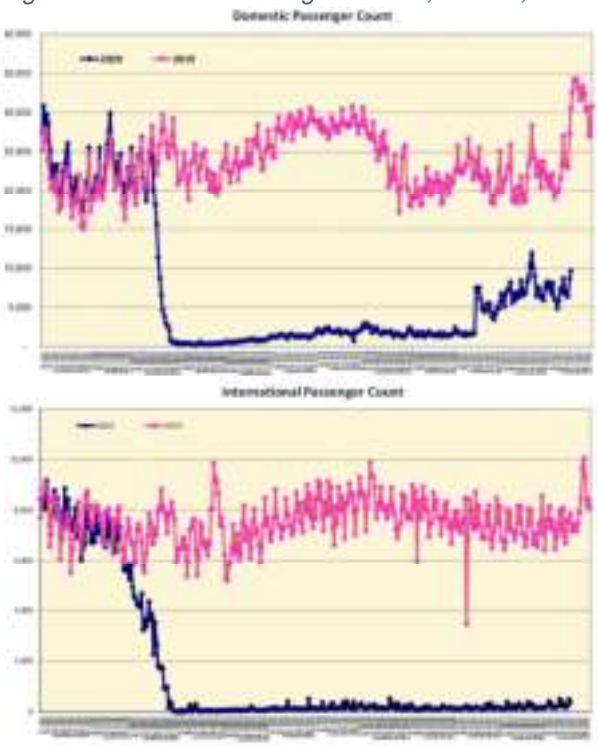
Figure 2: Ala Moana Study Area, 2020

COVID-19

The most notable disruptor to growth and development since previous planning processes is the COVID-19 pandemic. While the impacts of the pandemic are widespread, Hawaii's tourism economy has been particularly susceptible to disruption because of the dramatic slowdown of leisure and business travel. Domestic and international passengers arriving in Hawaii fell sharply in March. While domestic travel has seen a modest uptick this fall, international travel has remained stagnant (Figure 3).

Impacts to travel and tourism has direct impacts on real estate, particularly the retail and hospitality sectors. Throughout this report, insight on how COVID-19 is impacting local real estate has been provided to indicate short- and long-term effects.

Figure 3: In-Bound Passenger Counts, Hawaii, 2020



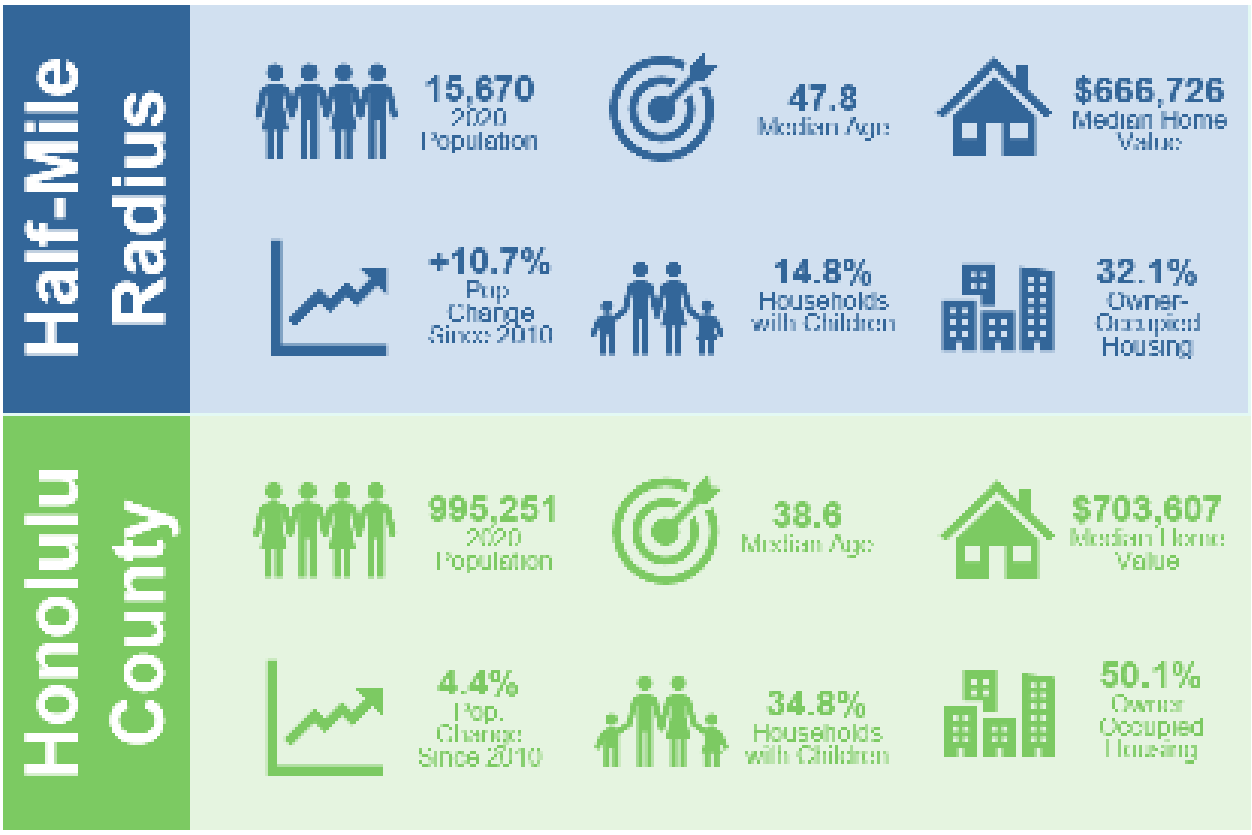
Source: State of Hawaii Department of Business, Economic Development, and Tourism

DEMOGRAPHIC PROFILE

To better understand dynamics impacting the real estate market, both now and in the future, this chapter highlights key demographic trends that are driving change in the profile of area residents with a focus on population and household trends by age, income, and tenure.

Demographic Overview

The graphic below compares key high-level indicators between the Study Area and Honolulu County. On average, the 15,670 people that currently reside within one-half mile of the planned transit center are older with smaller household sizes and fewer children living at home when compared to the County. Although the median home value in the Study Area falls slightly behind the County, the newest housing in the area have elevated price points, attracting financially established households.



Population Trends

The Study Area has grown by approximately 1,500 residents since 2010, reaching an estimated 15,670 people in 2020 (Table 1)Error! Reference source not found.. This growth equates to a 10.7% increase over the last decade. Comparatively, Honolulu County added more than 42,000 new residents, growing to over 995,000 people. The compound annual growth rates (CAGR) for the Study Area and Honolulu County were 1.0% and 0.4%, respectively.

Table 1: Comparison of Population Trends, 2010-2020

			2010-2020 Δ		
Area	2010	2020	#	%	CAGR
Half-Mile Radius	14,158	15,670	1,512	10.7%	1.0%
Honolulu County	953,207	995,251	42,044	4.4%	0.4%
Study Area % County	**1.5%**	**1.6%**	**3.6%**		

Source: ESRI Business Analyst Online; Kimley-Horn

Although the Study Area comprised 1.6% of the county population base in 2020, it captured 3.6% of the ten-year growth, indicating increased momentum in residential development around the Ala Moana Center over the last decade.

Population by Age

As shown in Table 2, population growth in the Study Area during the 2010s was largely driven by residents over the age of 55. The strongest absolute growth was in the two cohorts representing the Baby Boomers, aged 55 to 74, comprising more than 70% of the total increase in the Study Area. Two age cohorts lost population over the decade: residents 25 to 44, making up the older segment of the Millennial generation, and Generation X, aged 45 to 54.

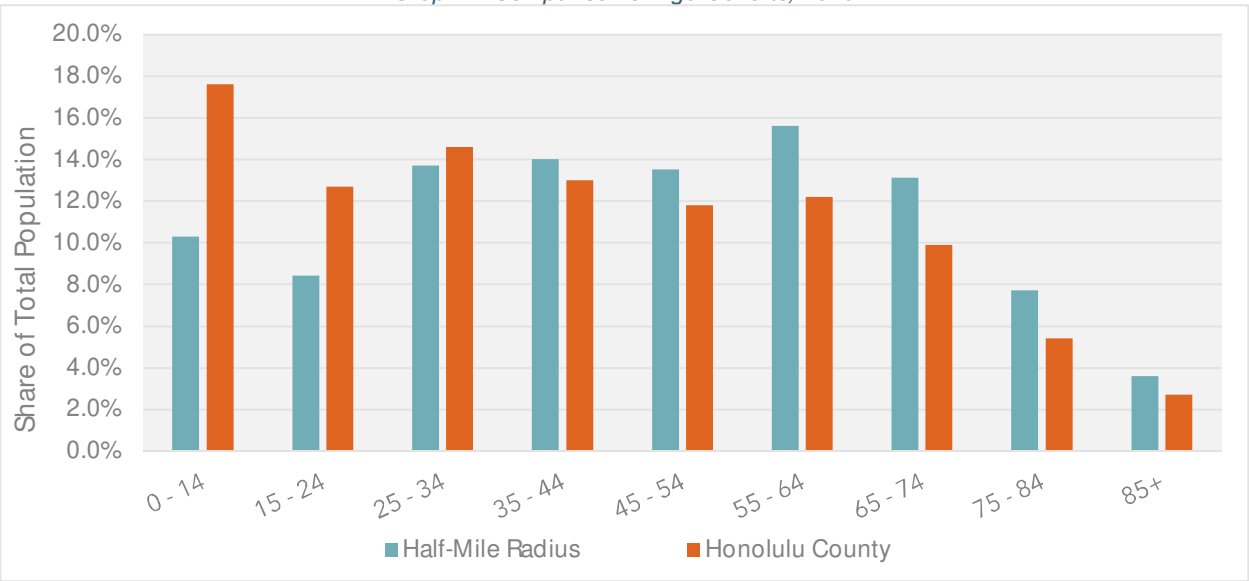
Table 2: Population by Age Cohort, Study Area, 2010-2020

			2010-2020 Δ	
Cohort	2010	2020	#	%
0 - 14	1,416	1,614	198	14.0%
15 - 24	1,218	1,316	99	8.1%
25 - 34	2,322	2,147	-175	-7.5%
35 - 44	2,095	2,194	98	4.7%
45 - 54	2,180	2,115	-65	-3.0%
55 - 64	2,053	2,445	392	19.1%
65 - 74	1,373	2,053	679	49.5%
75 - 84	1,076	1,207	131	12.1%
85+	425	564	139	32.8%
Total	**14,158**	**15,670**	**1,512**	**10.7%**

Source: ESRI Business Analyst Online; Kimley-Horn

When compared to Honolulu County, the Study Area has higher shares of residents in all age groups over the age of 35, but lower shares of younger people (Graph 1). Study Area residents between the age of 55 and 64 make up the largest share at 15.6% of the total population.

Graph 1: Comparison of Age Cohorts, 2020



Source: ESRI Business Analyst Online; Kimley-Horn

Households Trends

The half-mile Study Area had an estimated 7,953 households in 2020, comprising 2.5% of the county-wide total (Table 3). Households in the Study Area increased 6.3% from 2010 to 2020. Comparatively, Honolulu County increased by 2.2% during the same time period. The CAGRs were 0.6% in the Study Area and 0.2% in Honolulu County. The Study Area captured 6.8% of the county household growth over the last decade.

Table 3: Comparison of Household Trends, 2010-2020

			2010-2020 Δ		
Area	**2010**	**2020**	**#**	**%**	**CAGR**
Half-Mile Radius	7,484	7,953	469	6.3%	0.6%
Honolulu County	311,047	317,992	6,945	2.2%	0.2%
Study Area % County	**2.4%**	**2.5%**	**6.8%**		

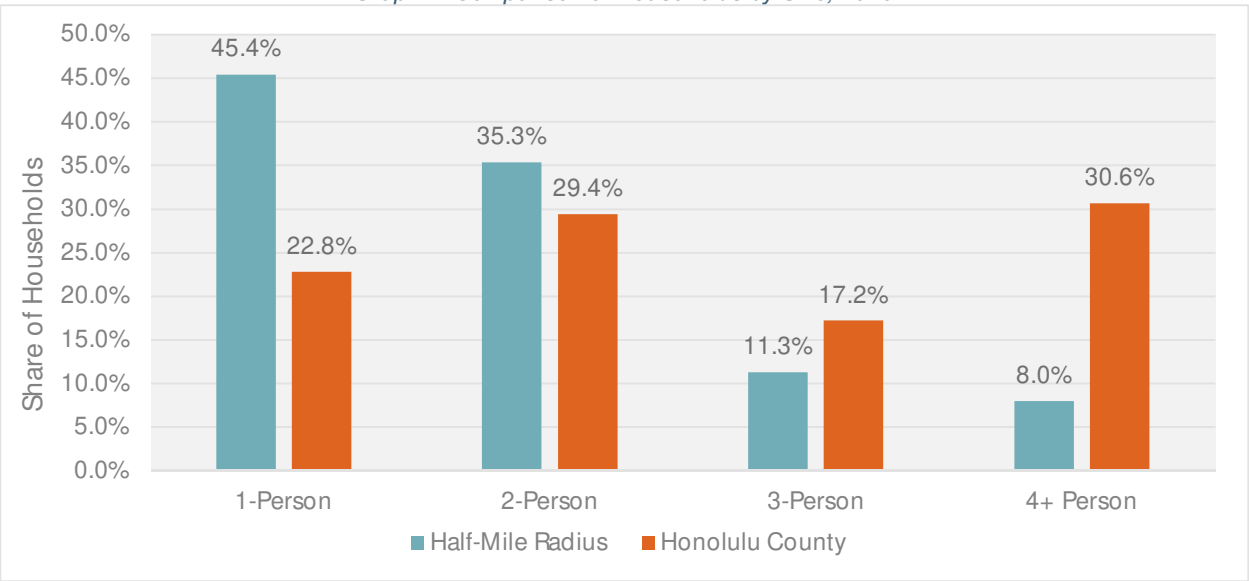
Source: ESRI Business Analyst Online; Kimley-Horn

Household Size

Households in the Study Area grew at a slower rate than population between 2010 and 2020, indicating an increasing household size over the time period. The average household size in the Study Area was estimated at 1.95 persons in 2020, notably less than 3.02 in Honolulu County. This finding speaks to higher concentrations of family households with children in other areas of the County. This result is likely due, in part, to availability of housing inventory attractive to families.

As shown in Graph 2, one-person households comprise more than 45% the Study Area total, compared to 22.8% for the county. Combined, smaller, one- and two-person households make up more than 80% of the Study Area. Comparatively, the county has higher shares of all larger household sizes.

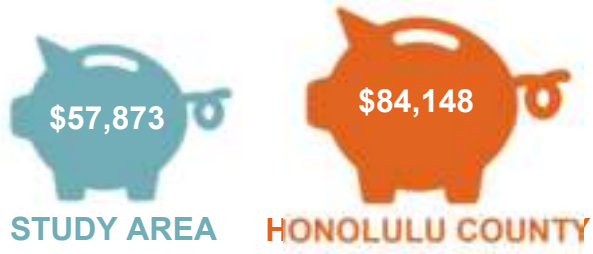
Graph 2: Comparison of Households by Size, 2020



Source: ESRI Business Analyst Online; Kimley-Horn

Household Income

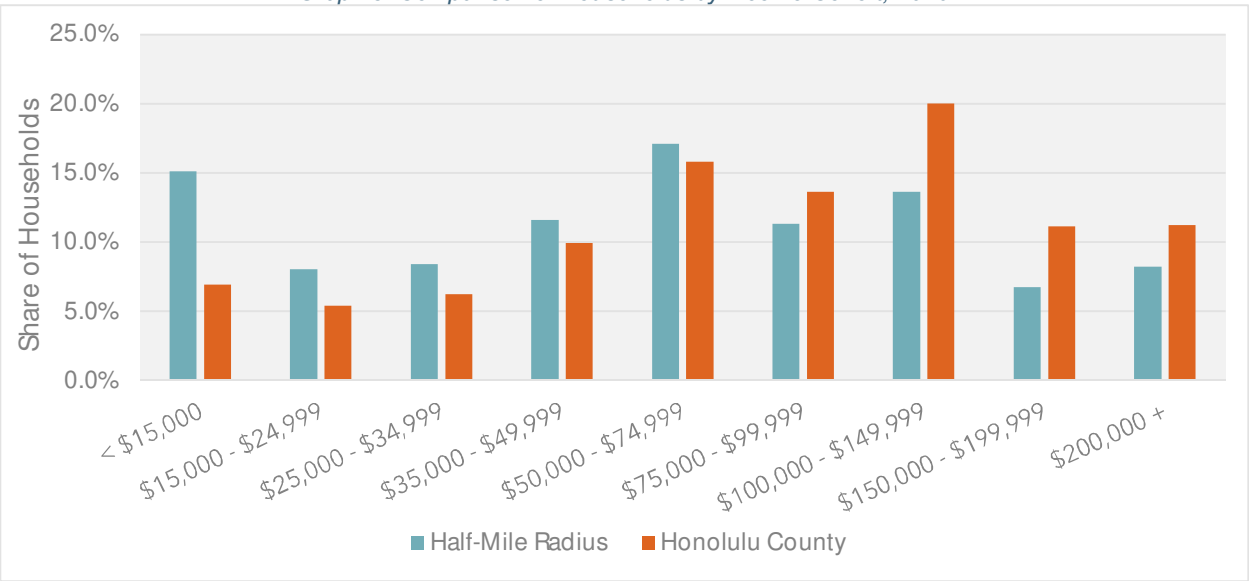
The Study Area has an estimated median household income of $57,873 in 2020, lower than reported measures for Honolulu County ($84,148).



Source: ESRI Business Analyst Online; Kimley-Horn

Households earning between $50,000 and $74,999 annually represent 17.1% of all households in the Study Area (Graph 3). Higher-earning households are more prevalent in the county, with the largest concentration earning between $100,000 and $149,999 annually. It should be noted that approximately 15% of Study Area households earn less than $15,000 annually. This could be influenced by retirees that are living on retirement income instead of annual salaries.

Graph 3: Comparison of Households by Income Cohort, 2020

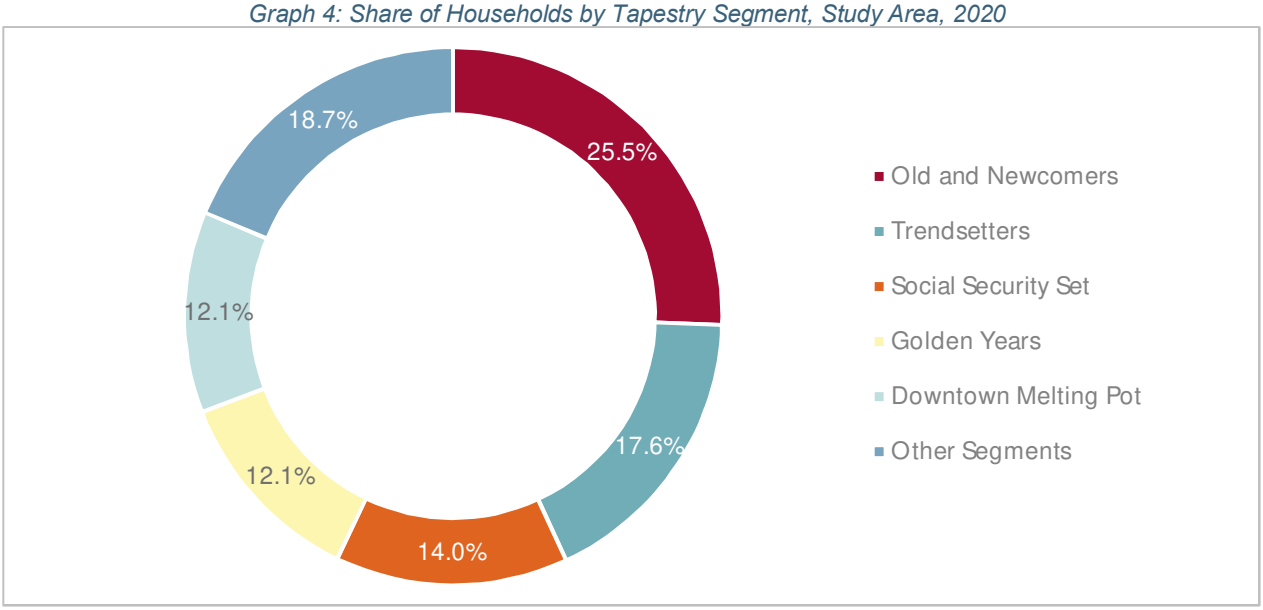


Source: ESRI Business Analyst Online; Kimley-Horn

Tapestry Segmentation Analysis

Tapestry segmentation, provided by Environmental Systems Research Institute, divides households into 67 groups based on consumer spending patterns and lifestyle attributes. Data provided in this type of analysis is increasingly being used by developers, builders, and retail tenants in the site selection and due diligence process. Old and Newcomers comprises the largest tapestry segment in the Trade Area at 25.5%, followed by Trendsetters at 17.6% and Social Security Set at 14.0% (Graph 4). Descriptions of the two most common tapestries in the Study Area are provided below.

Graph 4: Share of Households by Tapestry Segment, Study Area, 2020



Source: ESRI Business Analyst Online; Kimley-Horn

OLD AND NEWCOMERS

This segment is typically composed of renters who are just beginning their careers or retiring. Some are still in college; some are taking adult education classes. Most are single, along with some married couples who do not have children. This segment ranks in the bottom third of budget and wealth indexes.

DEFINING TRAITS:

- Metropolitan city-dwellers.
- Unemployment is lower at 5.1%, with an average labor force participation rate of 62.6%.
- Consumers are price-aware and environmentally conscious.
- 45% of housing units are single-family dwellings; 45% are multiunit buildings in older neighborhoods, built before 1980.
- Most common occupations are in Office & Administrative Support and Sales.

Typical Housing:
Single-Family Units; Multifamily Units

Median Income:
$44,900

Predominant Tenure:
54.8% renter-occupied

TRENDSETTERS

This segment is typically comprised of well-educated young singles, who typically do not own homes or vehicles and spend their disposable income on upscale city living. They are regularly employed in Management or Office & Administrative Support roles. This segment ranks above the U.S. average for household income, but well below average for net worth.

DEFINING TRAITS:

- Over 75% are renters.
- Spenders rather than savers; image is important to these consumers, and they value fashion and upscale living.
- Many do not own a vehicle. Instead, walking, public transportation, and biking are popular.
- They shop at Whole Foods and Trader Joe's and like to buy organic food.
- Trendsetters are always connected via the internet and social media.

Typical Housing:
Multifamily Units

Median Income:
$63,100

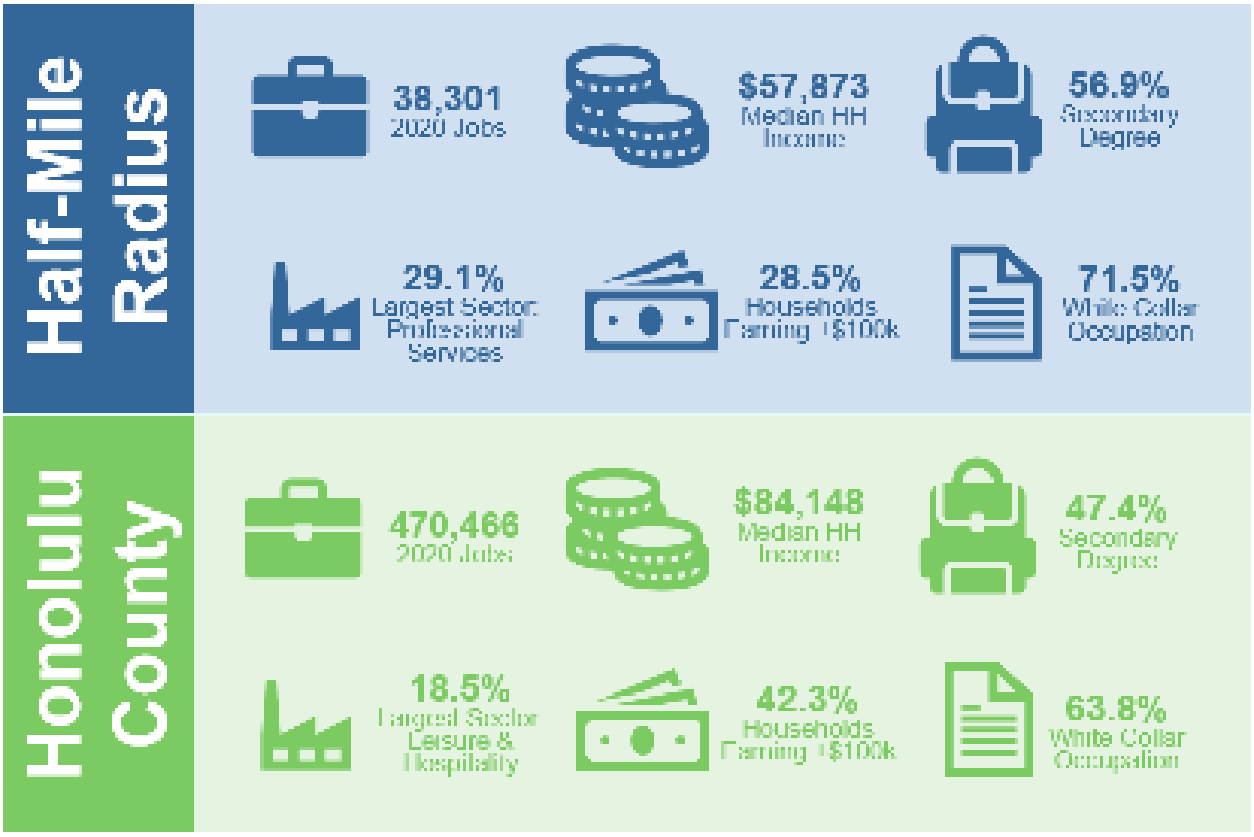
Predominant Tenure:
75.5% renter-occupied

EMPLOYMENT PROFILE

This section of the report analyzes annual employment trends by industry over the last five years for Honolulu County, and more specifically for the Study Area, describing overall growth and shifts between sectors.

Economic Overview

Containing a notable concentration of commercial space, anchored by the Ala Moana Center, the Study Area represents an important economic engine for the region. The Study Area is attractive to a wide variety of employment sectors, offering a wide variety of retailers, dining, nightlight, and hospitality offerings, and professional office space. When compared to Honolulu County, households have a lower median household income, but are highly educated. It is expected that the influence of households relying on retirement savings influences the overall median income level reported by the US Census.



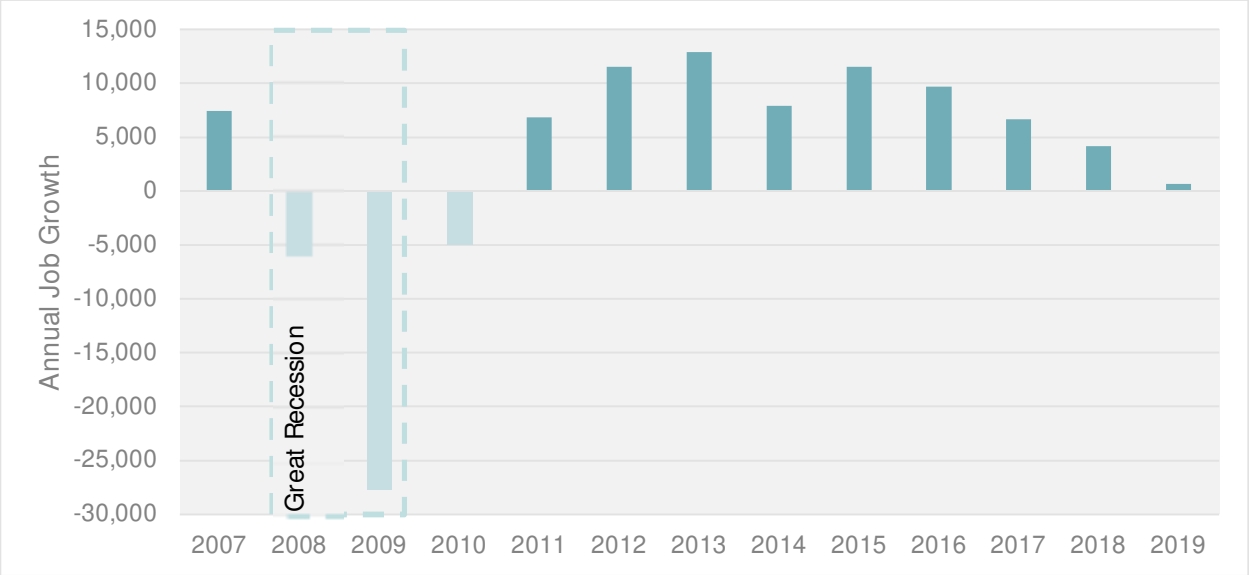
Annualized Regional Employment

Consistent with national trends, the Honolulu economy was interrupted by the 2007-2009 Great Recession, reporting annual net job losses during and immediately after this period (

Graph 5). The largest annual loss was demonstrated in 2009 with a net loss of over 27,500 jobs across the county. In the years since 2011, Honolulu County has largely recovered, posting annual net job gains

averaging more than 8,000 jobs per year. Annual net job growth in the County exceeded pre-Recession levels in recent years.

Graph 5: Annual Net New Job Growth, Honolulu County, 2007-2019



Source: Hawaii Department of Labor and Industrial Relations; Kimley-Horn

As shown in Table 4, employment in Honolulu County increased by more than 12,600 jobs, or 2.8%, between 2014 and 2019. Total annual employment in 2019 exceeded 470,000. Public Administration, including federal, state, and local non-military government positions, was the largest industry, comprising 20% of the total, followed by Accommodation and Food Services, which supports Honolulu's robust tourism industry, representing the next largest share of employment at 14.3%. Together, these two sectors comprise 34.3% of the total county employment. Only six of twenty industries experienced declines during the five-year period, with Administrative and Waste Services, Public Administration, and Retail Trade representing the most notable recent losses.

The following industries showed the most significant employment gains since 2014:

- Accommodation and Food Services (+6,670 jobs)
- Transportation and Warehousing (+4,247 jobs)
- Healthcare and Social Assistance (+3,599 jobs)
- Construction (+3,052 jobs)
- Arts, Entertainment, and Recreation (+1,534 jobs)

Table 4: Annualized Employment by Industry, Honolulu County, 2014-2019

Industry	2014	2019	2014-2019 Δ #	2014-2019 Δ %
Accommodation and Food Services	60,574	67,244	6,670	11.0%
Transportation and Warehousing	19,430	23,677	4,247	21.9%
Health Care and Social Assistance	50,394	53,993	3,599	7.1%
Construction	23,677	26,729	3,052	12.9%
Arts, Entertainment, and Recreation	7,073	8,607	1,534	21.7%
Finance and Insurance	12,487	13,612	1,125	9.0%
Real Estate and Rental and Leasing	7,789	8,902	1,113	14.3%
Other Services, Ex. Public Admin	19,572	20,442	870	4.4%
Management of Companies and Enterprises	7,699	8,462	763	9.9%
Educational Services	10,969	11,421	452	4.1%
Wholesale Trade	14,079	14,397	318	2.3%
Information	7,054	7,320	266	3.8%
Professional and Technical Services	20,868	21,067	199	1.0%
Mining	188	203	15	8.0%
Agriculture, Forestry, Fishing & Hunting	1,887	1,861	-26	-1.4%
Utilities	2,553	2,474	-79	-3.1%
Manufacturing	11,048	10,966	-82	-0.7%
Retail Trade	47,575	47,392	-183	-0.4%
Public Administration	95,397	94,131	-1,266	-1.3%
Administrative and Waste Services	37,502	27,566	-9,936	-26.5%
Total	**457,815**	**470,466**	**12,651**	**2.8%**

Source: Hawaii Dept. of Labor and Industrial Relations; Kimley-Horn and Associates

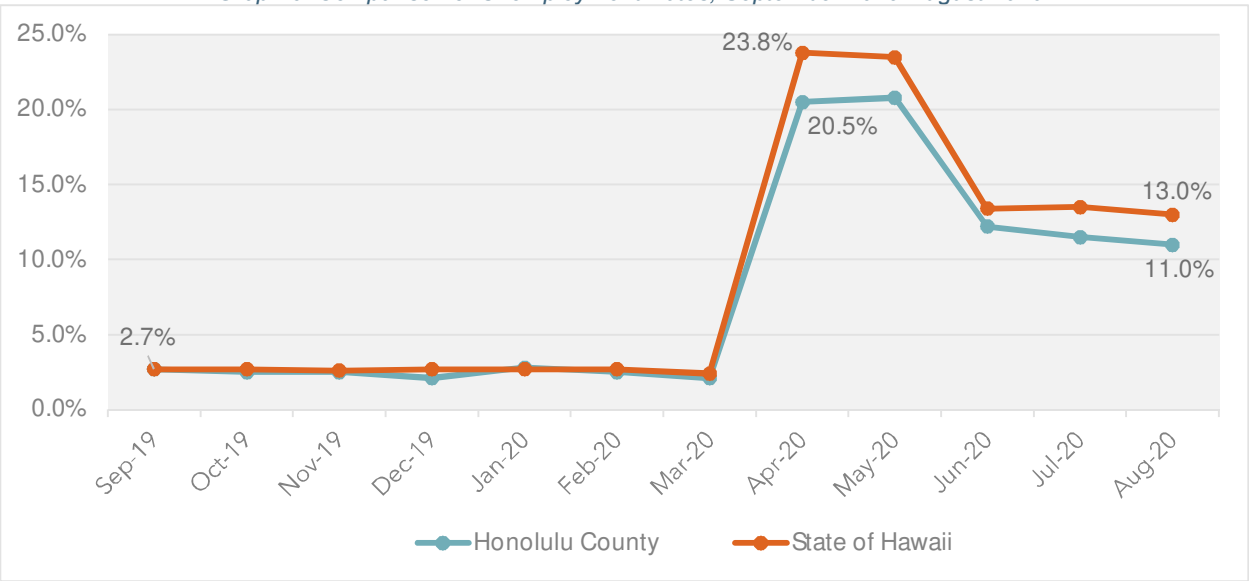
The most recently reported average annual wage for Honolulu County was $55,262 in 2019, representing an increase of 17.4% over five years. The largest employment industry in the county, Public Administration, reported an average annual wage of $65,780. The highest average wages were $109,148 for Utilities and $103,012 for Mining, but these sectors only comprise 0.6% of the employment base.

Unemployment Rate

Since March 2020, the United States has been heavily impacted by the COVID-19 pandemic, which has resulted in job losses in every region of the country. Retail Trade, Entertainment, Hospitality and Food Services have been hit particularly hard as many establishments were required to close or restrict business to stop the spread of the virus.

The most recently released at-place employment data for the State of Hawaii is from first-quarter 2020, which does not incorporate job impacts resulting from the COVID-19 pandemic. Unemployment data, which is released monthly, demonstrates a rapid peak in unemployment between March and April of 2020, followed by improvements through the summer months. While unemployment rates in Honolulu and the State of Hawaii have improved from peaks in April 2020 to 11.0% (Honolulu) and 13.0% (State) in August 2020, they are still far from pre-COVID measures that typically ranged from 2.5% to 3.0% between September 2019 and February 2020 (Graph 6).

Graph 6: Comparison of Unemployment Rates, September 2019-August 2020



Source: Hawaii Department of Labor and Industrial Relations

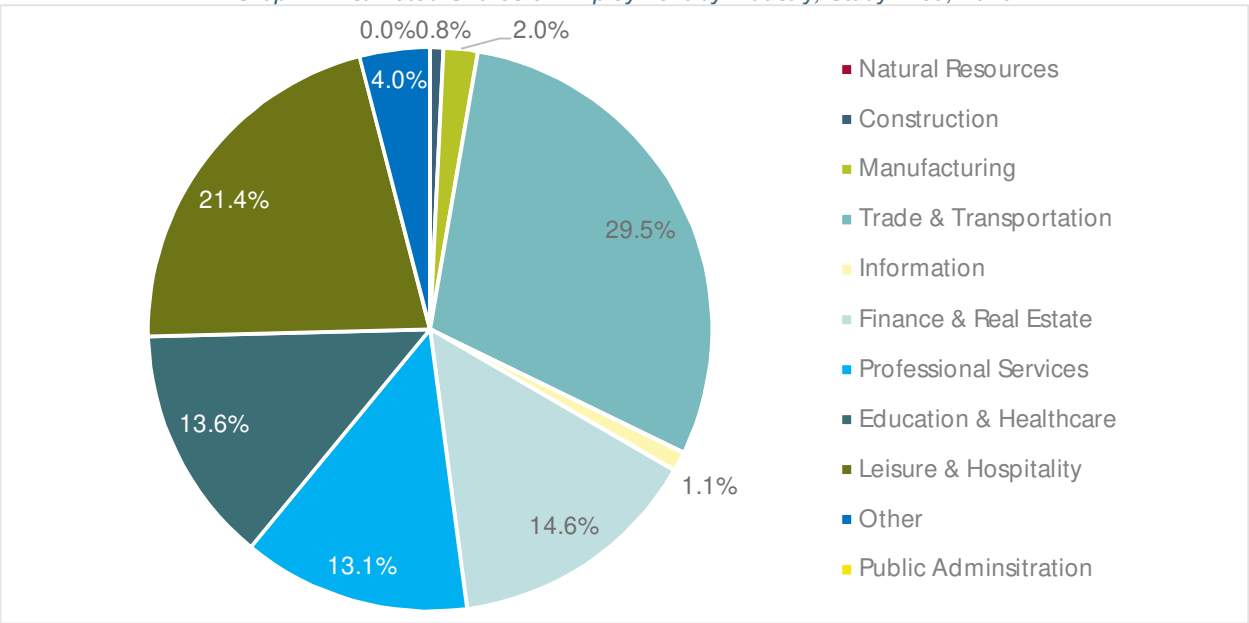
While the unemployment measures demonstrated above are indicative of larger national trends, many metropolitan regions across the United States have experienced continued momentum towards recovery while Honolulu County has remained stable through the summer. Recovery in Hawaii will be dependent on consumer confidence in travel, which will help to rebound the State's tourism market. In-bound passenger trips to Hawaii and hotel occupancy remain well-below typical measures.

Study Area Employment

The Study Area hosts an estimated 38,301 jobs. Professional and Technical Services, located in the Study Area's office inventory, represents the largest sector with approximately 11,136 jobs, or 29.2% of the total. Retail Trade (7,254 jobs) and Accommodation and Food Services (5,091 jobs) represent the second and third largest sectors, anchored by the Ala Moana Center and surrounding commercial properties.

Combined, Professional Services and Trade positions make up nearly one-half of all jobs in the Study Area (Graph 7). Professional Services are most commonly located in office buildings, and typically seek locations that offer easy access to amenities for workers. The Ala Moana Center, as well as the other supporting retail in the Study Area act as an important amenity to nearby employees but are also a notable attraction to locals and tourists alike.

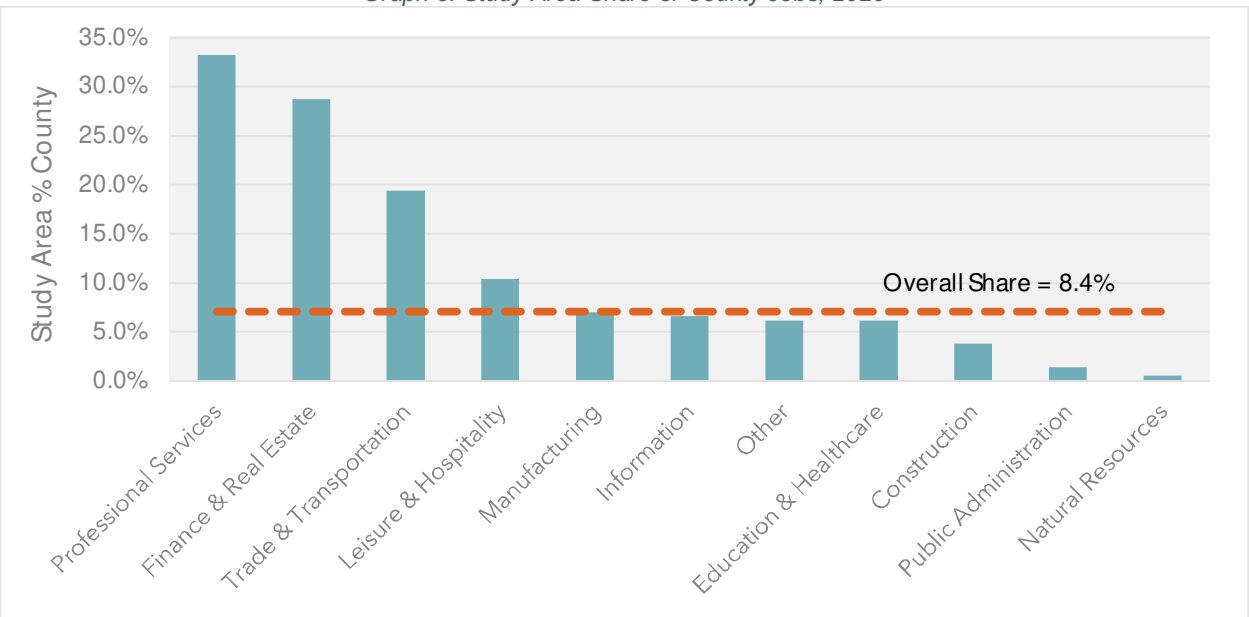
Graph 7: Estimated Shares of Employment by Industry, Study Area, 2020



Source: ESRI BAO; Kimley-Horn

As shown in Graph 8, the nearly 38,301 jobs in the Study Area comprise 8.4% of the county total. The sectors with the largest regional influence include Professional Services (33.2%), Finance & Real Estate (28.7%) and Trade & Transportation, primarily driven by retail positions (19.4%).

Graph 8: Study Area Share of County Jobs, 2020



Source: ESRI BAO; Kimley-Horn

REAL ESTATE PROFILES

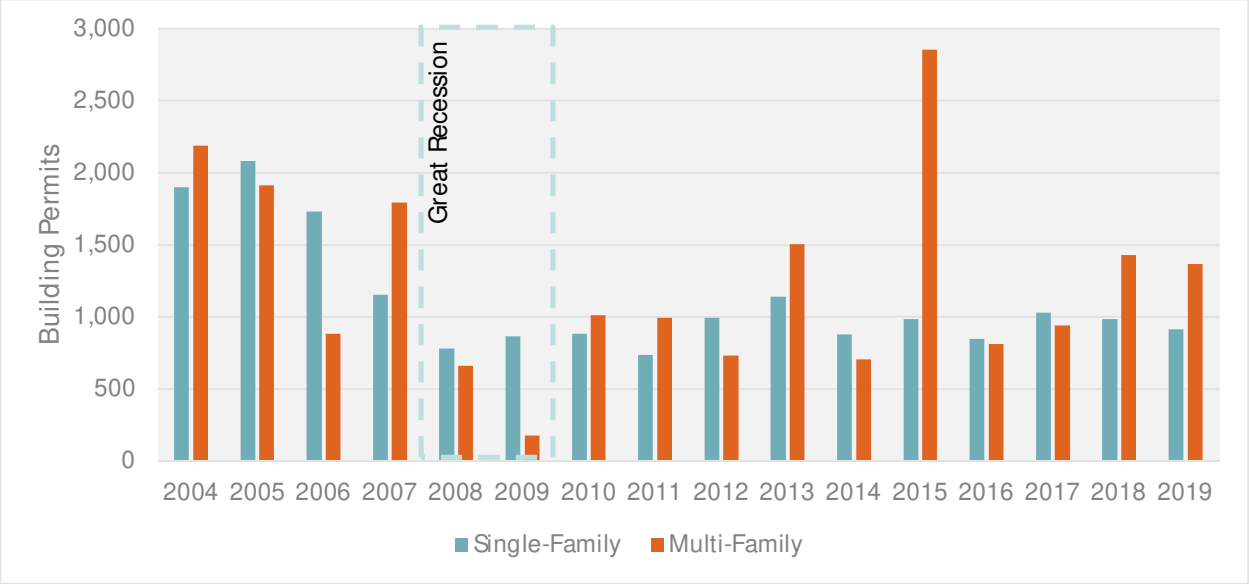
The real estate profiles presented in this section of the report provide an indication of recent market performance and future demand potential. The section is divided by real estate sector with a focus on those that would be most attracted to the Study Area, including multi-family residential, retail, office, and hospitality uses.

Multifamily Residential

This section provides an overview of the multifamily residential market in the Trade Area. Data points include building permitting activity, for-sale condominium closing trends, and a review of the rental multifamily market.

Prior to the 2007-2009 Great Recession, Honolulu County averaged approximately 3,400 residential buildings permits per year. Multifamily units comprised nearly one-half of the total. As shown in Graph 9, the permit average during and immediately following the Recession declined to approximately 1,500 per year. In 2019, the most recently reported annual total, single-family permits made up 40% of the county-wide total and multifamily made up the balancing share of 60%, demonstrating increasing momentum in multifamily activity.

Graph 9: Residential Building Permit Trends, Honolulu County, 2010-2020



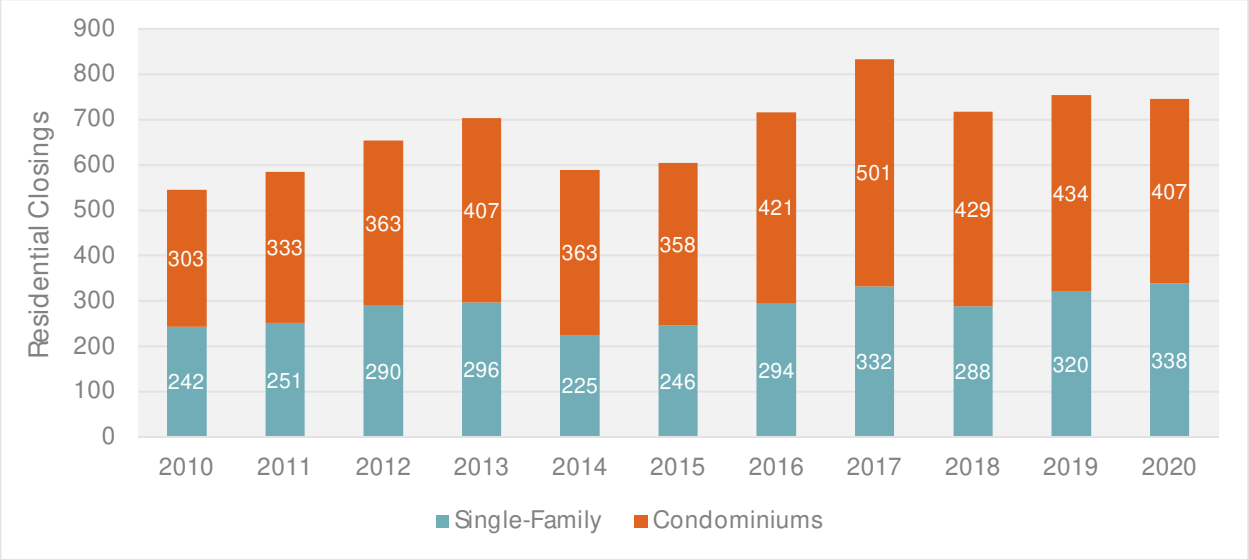
Source: US Census, Kimley-Horn

For-Sale Residential

Data for for-sale residential performance were obtained by the Honolulu Board of REALTORS and incorporate new and resale units into one aggregate data set. Year-to-date, single-family detached unit sales are roughly tracking with 2019 performance, measuring a modest increase of 5.6%. However, the condominium market is struggling to maintain the momentum established pre-pandemic, falling by approximately 8.5% (Graph 10). Over a longer trend, both single-family and multifamily annual residential

unit closings have increased since2010. Condominium closings increased by 34.3% from 303 in November of 2010 to 407 units in November 2020.

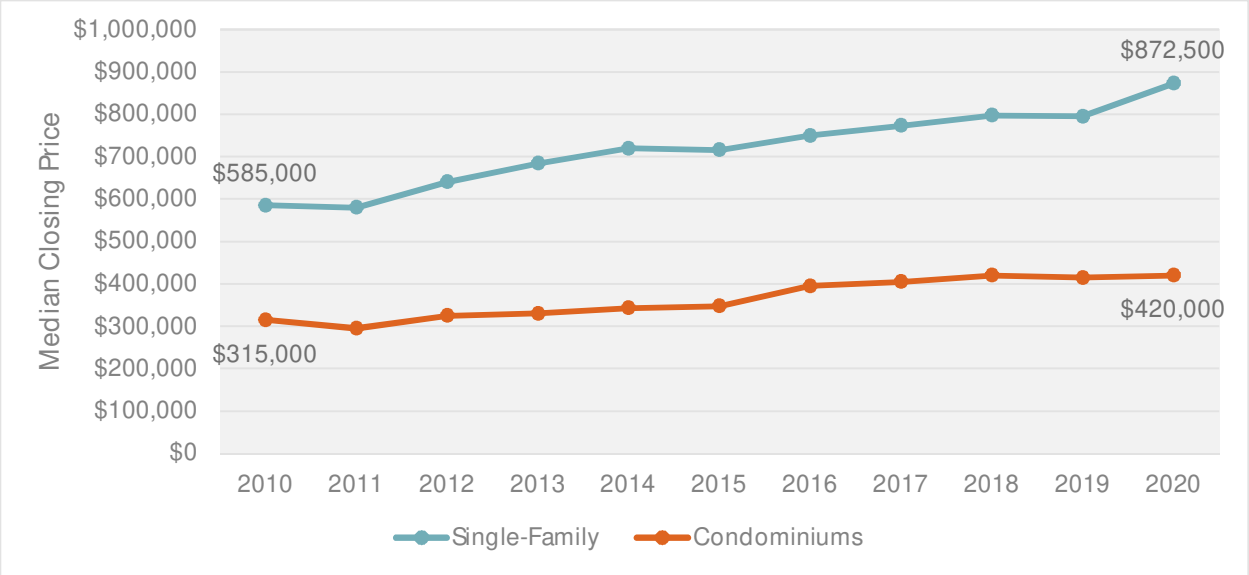
Graph 10: For-Sale Residential Closing Trends, Honolulu County, 2010-2020



Source: Honolulu Board of REALTORS

The median sales price of single-family homes increased 9.8% compared to November 2019 to $872,500. Properties priced at $700,000 and above marked a 25.7% increase in closed sales and represented more than 80% of all single-family homes sold last month. Condominium pricing has increased 33.3% since 2010 (Graph 11). However, it has remained relatively flat since 2018, increasing only 1.2% in the last 12 months. Mid-priced condominium units, in the $400,000 to $499,999 range, represented most of the sales, accounting for 22.1% in November.

Graph 11: For-Sale Residential Median Closing Price Trends, Honolulu County, 2010-2020



Source: Honolulu Board of REALTORS

According to the Board of REALTORS, new listings typically begin to wind down during the winter season, but new listings saw a year-over-year increase of over 10%. Sales in both the detached and attached markets continue to move quickly, with single-family homes and condos spending a median of 10 and 16 days on the market, respectively. The number of single-family homes and condos sold above the original asking price skyrocketed 210.2% and 79.2%, respectively, compared to this time last year. This indicates high demand for residential product, despite the COVID-19 pandemic.

There are several new projects in the Study Area. Table 5 summarizes the newest condominium projects completed (since 2010) or underway in the Study Area. Eight projects have been completed since 2010 with unit totals ranging from 171 units to 492 units. Price points start at $650,000.

Table 5: Competitive Condominium Projects, Study Area, 2020

Condominium Property	Year Built	Units	Stories	Status	Price Range
Pacifica Honolulu	2011	492	46	Complete	$655,000 - $1,395,000
One Ala Moana	2014	206	22	Complete	$1,080,000 - $3,199,000
Waihonua	2015	345	43	Complete	$1,049,000 - $2,790,000
Waiea	2017	171	36	Complete	$1,950,000 - $25,000,000
Anaha	2017	311	38	Complete	$720,000 - $15,000,000
Park Lane Ala Moana	2017	215	8	Complete	$1,650,000 - $12,745,000
AE'O	2018	466	41	Complete	$650,000 - $2,525,000
Kapiolani Residence	2018	485	45	Complete	$689,000 - $1,080,000
Azure Ala Moana	n/a	410	41	Under Construction (2021)	$876,690 - $1,374,450
The Central Ala Moana	n/a	512	43	Under Construction (2021)	$580,000 - $1,398,000*
Koula	n/a	565	41	Under Construction (2022)	$518,000 - $993,000
Hawaii City Plaza	n/a	163	26	Under Construction (2022)	Sales not started yet.

*40% of the units will be sold at market-rates; range in the table depicts these prices.

Source: Hicondos.com

Located adjacent to the planned transit center, The Central Ala Moana is expected to be complete in 2021. Pre-sales have begun on the project. Approximately 60% of the units will be priced as affordable, with the balance selling at market rates. Market rate pricing is expected to range from $585 to $1.3 million for one-, two-, and three-bedroom floorplans. Affordable housing prices will range from $286,000 to $709,000 for studio through three-bedrooms. Approximately 44% of the units will be two-bedrooms, making it the most common floorplan.


The Central

Project layout includes approximately 13 units per floor. All units will have access to at least one parking stall. Community amenities will include full-sized and kiddie swimming pools, a playground, outdoor kitchen area and cabanas, a multi-purpose room, and a fitness center. The building will have five elevators.

Rental Apartments

Many of the rental apartments completed in Honolulu County were built before 1970, comprising 43.0% of the inventory. The inventory presented in this section focuses on units in professionally managed communities of at least 25 units. Activity was limited to less than 1,000 units per decade in the 1970s and 1980s (Table 6). No units were built in the 20-year period between 1990 and 2009. Momentum increased in the last decade, delivering over 700 new rental units.

Table 6: Inventory by Decade Completed, Honolulu County, 2020

Decade Completed	Inventory	% of Total
Before 1970	2,024	43.0%
1970s	942	20.0%
1980s	942	20.0%
1990s	0	0.0%
2000s	0	0.0%
After 2009	744	17.0%
Total	**4,708**	**100.0%**

Source: Kimley-Horn; REIS

Since 2010, 744 apartment units have been completed in Honolulu County (Table 7). New deliveries were only tracked in two of the last ten years, 2016 and 2018. Annual net absorption outpaced new completions, resulting in an estimated undersupply of 77 units. It should be noted that apartment absorption has likely been limited by the amount of new product delivered. New units completed in 2016 and 2018 were quickly absorbed.

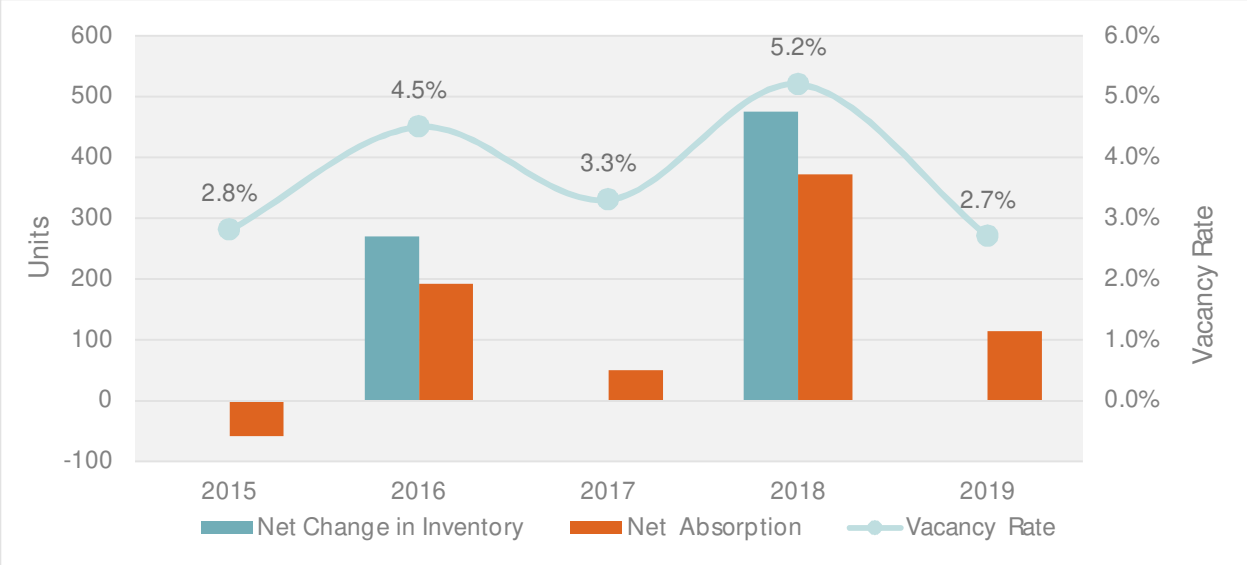
Table 7: Completion and Net Absorption Trends, Honolulu County, 2010-2020

Year	Net Change in Inventory	Net Absorption	(Over)/ Under Supply
2010	0	44	44
2011	0	24	24
2012	0	(36)	(36)
2013	0	20	20
2014	0	51	51
2015	0	(59)	(59)
2016	269	191	(78)
2017	0	49	49
2018	475	372	(103)
2019	0	114	114
Total	**744**	**770**	**(77)**
Ann. Avg.	**74**	**77**	**(8)**

Source: Kimley-Horn; REIS

As shown in Graph 12, the multifamily vacancy rate in Honolulu County has varied over the five-year period, ranging from 2.7% at year-end 2019 to 5.2% one year prior. As of September 2020, vacancy had stayed stable at 2.9%. Year-over-year, the rates have remained well-below the industry standard 7.0% often quoted to represent a healthy market.

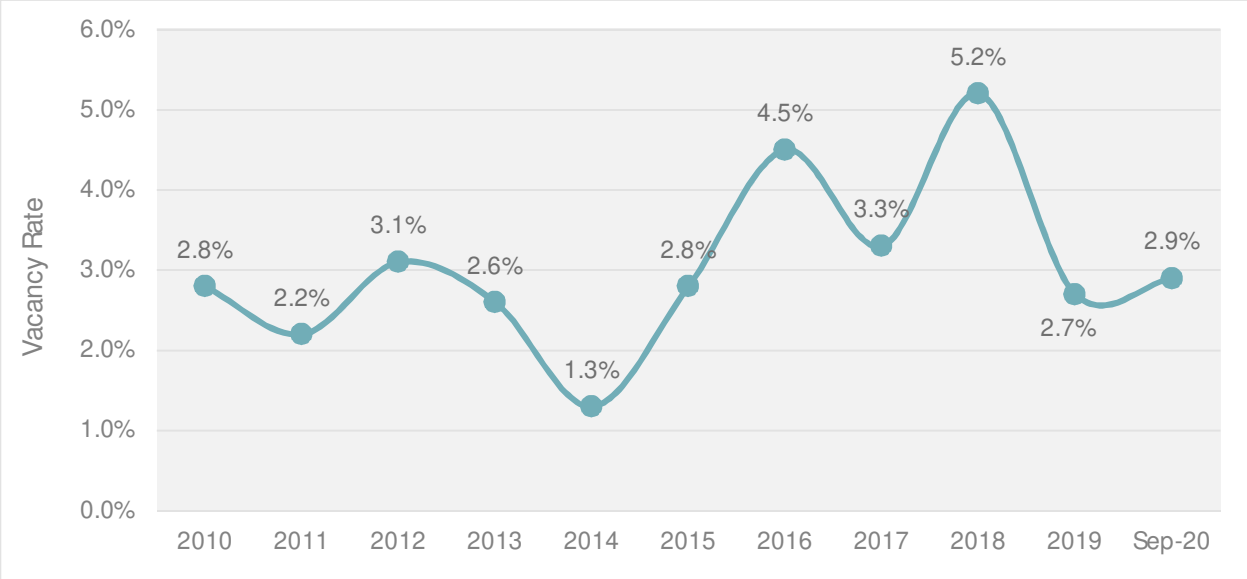
Graph 12: Apartment Market Performance, Honolulu County, 2015-2020



Source: REIS; Kimley-Horn

Graph 13 demonstrates longer vacancy rate trends in Honolulu County between 2010 and September 2020. Vacancy in Honolulu County has remained relatively stable between 2.5% and 5.5% year-over-year. Peaks in vacancy correlate to delivery of new apartment product, but in each case the county-wide vacancy rate recovered quickly following rapid absorption of the new units.

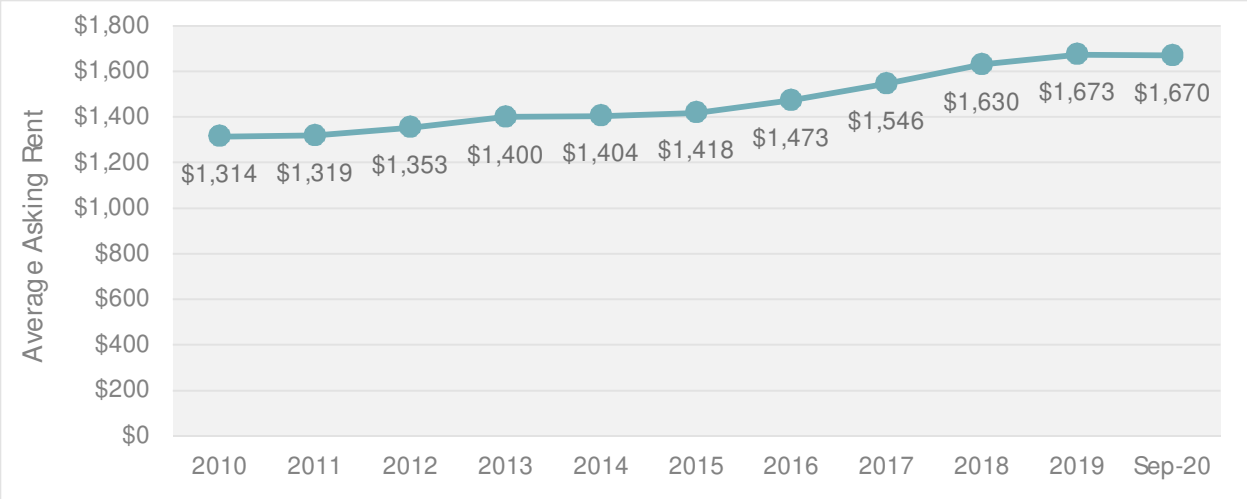
Graph 13: Apartment Vacancy Rate Trends, Honolulu County, 2010-2020



Source: REIS; Kimley-Horn

Between 2010 and September 2020, the average monthly rent in Honolulu County increased from $1,314 per month to $1,670, a 27.1% increase over a decade (Graph 14). It should be noted that although monthly rents demonstrated strong increases in the last decade, price points have been largely static since 2018.

Graph 14: Average Monthly Rent Trends, Honolulu County, 2010-2020



Source: REIS; Kimley-Horn

There is a very limited inventory of competitive market-rate apartment communities in the Study Area. Given the inventory of condominium units, many of the rental options are in investor-owned units in these projects.

COVID-19 and Residential

While the full impact of COVID-19 remains to be seen, it is certain that the pandemic will influence growth and development in the near-, and likely, long-term. Industry experts across the country have provided guidance on the potential for the pandemic to influence different real estate sectors. Residential is expected to be modestly impacted in the short-term.

In most markets, for-sale residential inventories were low before the pandemic, and demand has remained consistent. Established long-term trends influencing for-sale residential demand are unlikely to be significantly impacted by COVID-19. The biggest question that could influence future demand for lower-density residential is if there will be a reversal in the desire for urban living by people seeking more space.

One of the biggest questions that could influence future demand for multifamily residential, particularly in suburban and rural markets, is if there will be a reversal in the desire for urban living by people seeking more space. Rental multifamily residential has experienced notable momentum in recent years as Millennials form new households. These young people have typically been more willing to rent longer-term than previous generations. Given the strong increase in inventory experienced in markets there is expected to be some softness in the rental market in the short-term. Absorption of new units is likely to be delayed in some markets as existing tenants struggle to make rent payments or new residents delay household formation. This trend is likely to drive new rent specials and reduce annual rent increases. These impacts, although notable, are expected to be short-term in nature.

Retail

Sector Performance

This section provides an overview of the retail real estate market in Honolulu County. A retail gap analysis is presented to identify future demand potential based on supply and demand. Honolulu County had almost seven million square feet of multi-tenant retail space as of September 2020. As shown in Table 8, over 2.3 million square feet of space was completed before 1970, making it the most active decade for retail development. The 2010s introduced more than 450,000 square feet of new multi-tenant space, comprising approximately 7.0% of the inventory. It should be noted that these totals exclude free-standing and owner-occupied retail space.

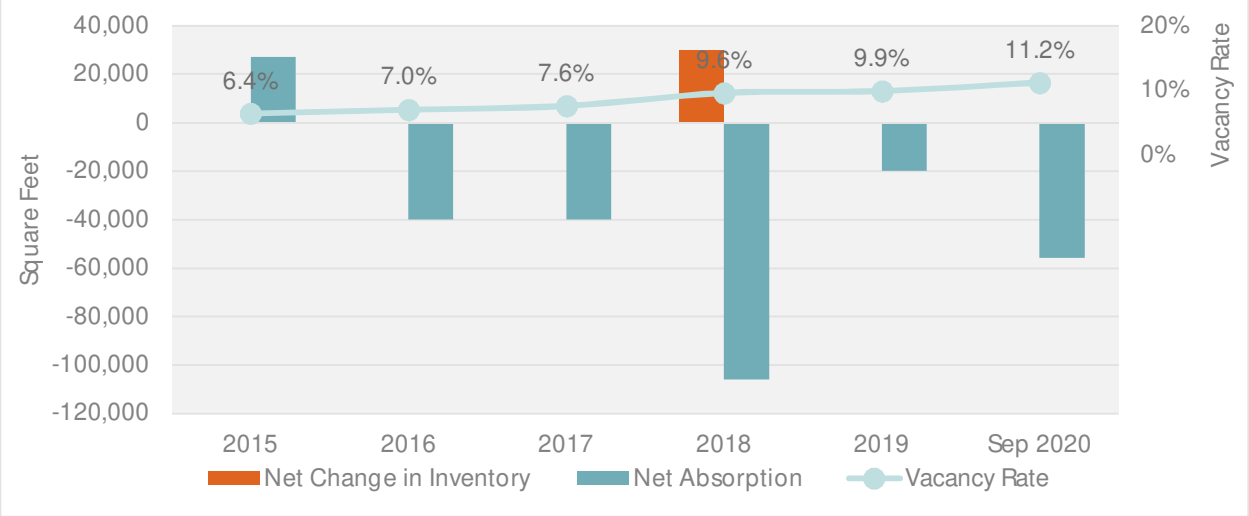
Table 8: Inventory by Decade Completed, Honolulu County, September 2020

Decade Completed	Inventory (SF)	% of Total
Before 1970	2,341,850	35.0%
1970s	1,271,290	19.0%
1980s	1,672,750	25.0%
1990s	535,280	8.0%
2000s	468,370	7.0%
After 2009	427,000	6.0%
Total	**6,691,000**	**100.0%**

Source: REIS; Kimley-Horn

Honolulu County has added only 30,000 square feet of net new multi-tenant retail space since 2015. Annual net absorption has been negative in each of the last five years, as more tenants vacated space than occupied it. As shown in Graph 15, multi-tenant vacancy rates in the county have steadily increased year-over-year, reaching 11.2% in September 2020.

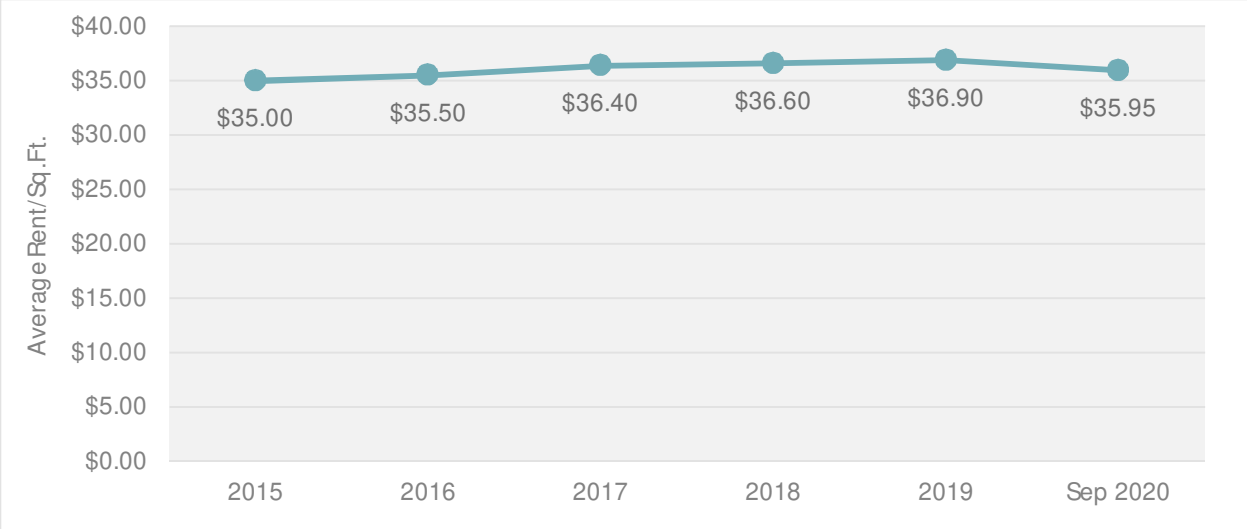
Graph 15: Retail Market Performance, Honolulu County, 2015-2020



Source: REIS; Kimley-Horn

Between 2015 and year-end 2019, average lease rates for multi-tenant retail spaces in Honolulu County steadily increased by 5.4%, from $35.00 to $36.90 (Graph 16). The most recent average reported for the county, $35.95 per square foot, was lower than the year-end 2019 measure. This is likely due to softness in the market as a result of new vacancies related to the COVID-19 pandemic.

Graph 16: Rent/Sq. Ft. Trends, Honolulu County, 2015-2020



Source: REIS; Kimley-Horn


Ala Moana Center

Ala Moana Center is a major destination shopping center for both tourists and locals. The outdoor-air mall was completed in 1959, but expanded several times since, reaching more than two million square feet of gross leasable area. It hosts several high-end anchors, including Nordstrom, Neiman Marcus, Macy's and Sears. The center is not only one the largest of its kind in the United States, but also for the highest grossing sales.

The presence of the Ala Moana Center in the Study Area defines the area as an important retail activity node for Honolulu County. In fact, retail inventory in the Study Area totals more than 3.3 million square feet of space, more than one-half of the total in Honolulu County. Other retail centers have also located in the area, offering more general retail services with big box anchors like Walmart and Sam's Club. These more traditional shopping opportunities are primarily located along Ke'eaumoku Street. Brookfield Properties Retail Group is the owner of the Ala Moana property and has started planning for the future of the center, including expansion and reimagining of the existing space. The process is still in the initial phases.

Retail Leakage Analysis

Retail leakage refers to the difference between the retail expenditures by residents living in a particular area and the retail sales produced by the stores located in the same area. If desired products are not available within that area, consumers will travel to other places or use different methods to obtain those products. Consequently, the dollars spent outside of the area are said to be "leaking." If a community is a major retail center with a variety of stores it will be "attracting" rather than "leaking" retail sales.

The graphic to the right shows the most recent data on retail sales and consumer expenditures for Honolulu County. The county's supply (how much stores sold) was nearly identical to demand (how much consumers spent). The unique nature of Hawaii influences this number as residents and tourists cannot easily travel to another area for goods and services.

The numbers are not meant as accurate accounts of individual stores, but, taken as an aggregate, they provide reasonable estimates of expenditures and sales. Equally important, this type of data is reviewed by national chains when deciding whether to move into a new area.

Source: ESRI BAO; Kimley-Horn

Table 9 demonstrates the retail gap for Honolulu County by retail category or industry group. Line items in green indicate groups where supply outpaces demand, while red categories indicate leakage. The industry group with the largest surplus of sales are commonly associated with the tourism industry, including Food Services and Drinking Places, Restaurants, and Clothing Stores.

Table 9: Retail Leakage/Surplus, Honolulu County, 2020

Industry Group	Demand	Supply	Retail Gap	Leakage/ Surplus Factor
Motor Vehicles & Parts Dealers	$2,719,171,443	$1,627,116,388	$1,092,055,055	25.1
Furniture & Home Furnishings	$394,227,227	$329,346,841	$64,880,386	9.0
Electronics & Appliance Stores	$284,662,978	$326,448,839	-$41,785,861	-6.8
Building Materials & Supply Stores	$844,115,203	$543,855,087	$300,260,116	21.6
Food and Beverage Stores	$1,728,086,179	$1,909,583,306	-$181,497,127	-5.0
Health & Personal Care Stores	$1,214,226,722	$1,514,063,804	-$299,837,082	-11.0
Gasoline Stations	$1,247,008,473	$789,952,394	$457,056,079	22.4
Clothing & Clothing Accessory Stores	$1,112,859,007	$1,648,384,240	-$535,525,233	-19.4
Sporting Goods, Hobby, Books & Music Stores	$347,493,609	$411,443,568	-$63,949,959	-8.4
General Merchandise Stores	$2,540,270,724	$2,533,082,550	$7,188,174	0.1
Miscellaneous Store Retailers	$564,892,380	$581,381,212	-$16,488,832	-1.4
Nonstore Retailers	$241,578,310	$92,252,877	$149,325,433	44.7
Food Services & Drinking Places	$1,441,215,875	$2,321,893,673	-$880,677,798	-23.4
Restaurants/Other Eating Places	$1,369,374,694	$2,168,025,586	-$798,650,892	-22.6

Source: ESRI Business Analyst Online

COVID-19 and Retail

Retail is widely expected to be one of the most impacted industries during and following the COVID-19 pandemic. Not only were retail businesses and restaurants required close in many states across the country to support social distancing, they have often had to reopen to capacities that are 50% or less than pre-pandemic levels. Local, or independent, retailers have been hit particularly hard, with many having to shutter their doors as consumer spending and store traffic plummeted. It should be noted that some retailers, primarily grocery, pharmacy, and building supply stores that offer essential services, have fared well during this time.

On top of the direct closure impacts related to COVID-19, it is not disputed that consumer preferences were already shifting. COVID-19 has amplified trends that were already impacting retail, particularly as it relates to the influence of online shopping. Online shopping has increased rapidly since the beginning of March. As local economies reopen, brick and mortar sales will rebound. That can already be demonstrated in retail receipt indexes. However, online retailers will be positioning to sustain their newfound capture. Locations that offer experiential retail options will be well positioned to attract initial momentum during recovery from the COVID-19 pandemic.

Office

This section presents office performance trends including completions, net absorption, vacancy and average rent per square foot for Honolulu County. There is an estimated 10.7 million square feet of multi-tenant office space in Honolulu County (Table 10). Almost one-third of the multi-tenant office inventory in the county was completed in the 1980s, making it the most active decade for office development, followed by older product build before 1970, which comprises another 28%. Almost no new office space has been completed in the last two decades.

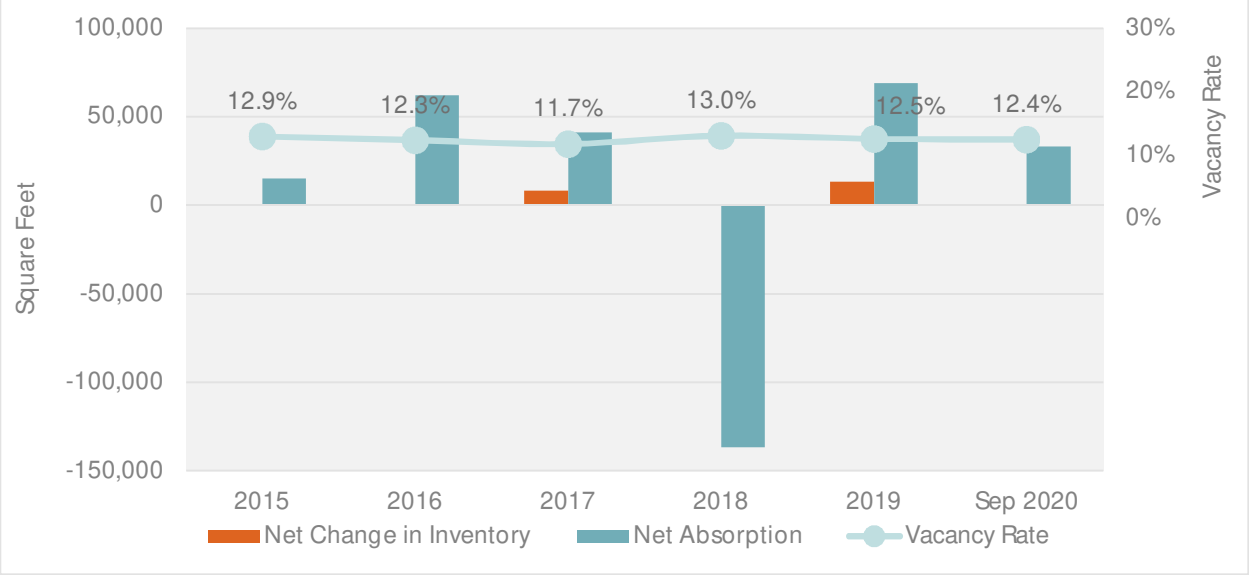
Table 10: Inventory by Decade Completed, Honolulu County, 2020

Decade Completed	Inventory (Units)	Share of Total
Before 1970	3,009,160	28.0%
1970s	2,471,810	23.0%
1980s	3,439,040	32.0%
1990s	1,719,520	16.0%
2000s	0	0.0%
After 2009	107,470	1.0%
Total	**10,747,000**	**100.0%**

Source: REIS; Kimley-Horn

A limited amount of new office space has been completed in Honolulu County since 2015, totally approximately 107,000 square feet. Net absorption over the five-year period totaled 83,000 square feet, with most years reporting positive absorption except for 2018. Coupling the limited amount of new square footage with modest net absorption, the Submarket posted an under supply of office space between 2015 and September 2020. The office vacancy rate in the Submarket remained constant, ranging from 12.0% to 13.0% year-over-year (Graph 17).

Graph 17: Office Market Performance, Honolulu County, 2015-2020



Source: REIS; Kimley-Horn

The average rent per square foot in Honolulu County was $31.91 in September 2020, representing a modest increase of 8.1% from $31.32 in 2015 (Graph 18). Average rents per square foot increased steadily over the last five years but reported a slight decline between year-end 2019 and September 2020. This is consistent with national trends, resulting from market softness due to the COVID-19 pandemic as many companies delayed office planning exercises and expansion plans.

Graph 18: Average Rent/Sq. Ft. Trends, Honolulu County, 2015-2020

Source: REIS; Kimley-Horn

There is approximately 1.5 million square feet of multi-tenant office space located in the Study Area. None of the existing space was completed in the last 20 years. As shown in Table 11, nearly two-thirds of the competitive office space in the Study Area was completed before 1970. The Pan Am Building, located on Kapiolani Boulevard, is the largest, with more than 210,000 square feet of gross leasable space. On average, the buildings in the Study Area have a weighted average rent of $39.83 per square foot and an average vacancy of 11.0%, both indicators are improvements over the county-wide measures.

Table 11: Competitive Office Inventory, Study Area, 2020

Building	Address	Year Build	Gross Sq.Ft.	Quoted Rent	Vacancy
Pan Am Building	1600 Kapiolani Blvd	1969	210,583	$42.12	28.4%
Ala Moana Building	1441 Kapiolani Blvd	1961	199,500	$53.40	0.0%
Ala Moana Pacific Center	1585 Kapiolani Blvd	1983	169,900	$58.20	13.1%
615 Piikoi St	615 Piikoi St	1979	145,953	$27.46	5.4%
1221 Kapiolani Blvd	1221 Kapiolani Blvd	1976	133,213	$39.68	16.6%
Pacific Guardian Tower	1440 Kapiolani Blvd	1989	123,690	$42.47	10.0%
1357 Kapiolani Blvd	1357 Kapiolani Blvd	1991	112,651	$41.20	6.2%
423 Kanakee St	423 Kamakee St	1977	112,307	$24.06	2.5%
Kapiolani Business Plaza	1580 Makaloa St	1978	87,634	$38.57	0.0%
Eleven50 Building	1150 S King St	1966	58,000	$20.98	6.2%
Hawaiin Life Building	1311 Kapiolani Blvd	1954	40,300	$33.09	11.0%
1350 King St	1350 S King St	1962	39,999	$31.16	37.4%
Radiant Research Building	401 Kamakee St	1977	32,644	$24.59	0.0%
1347 Kapiolani	1347 Kapiolani Blvd	1956	30,676	$18.48	14.5%
Kakaako Business Center	1019 Waimanu St	1984	12,000	$21.16	33.9%
Total/Average			**1,509,050**	**$39.83**	**11.0%**

Source: REIS; Kmiley-Horn

COVID-19 and Office

As the COVID-19 pandemic began, many companies moved to a remote platform to allow for social distancing. For those companies that were able, allowing employees to work from home provided maximum flexibility to respond to the pandemic. However, industries are craving the benefits that come from idea sharing and collaboration that can only truly be realized through face-to-face interaction. It is certain that the office sector will not stay fully remote in the long-term.

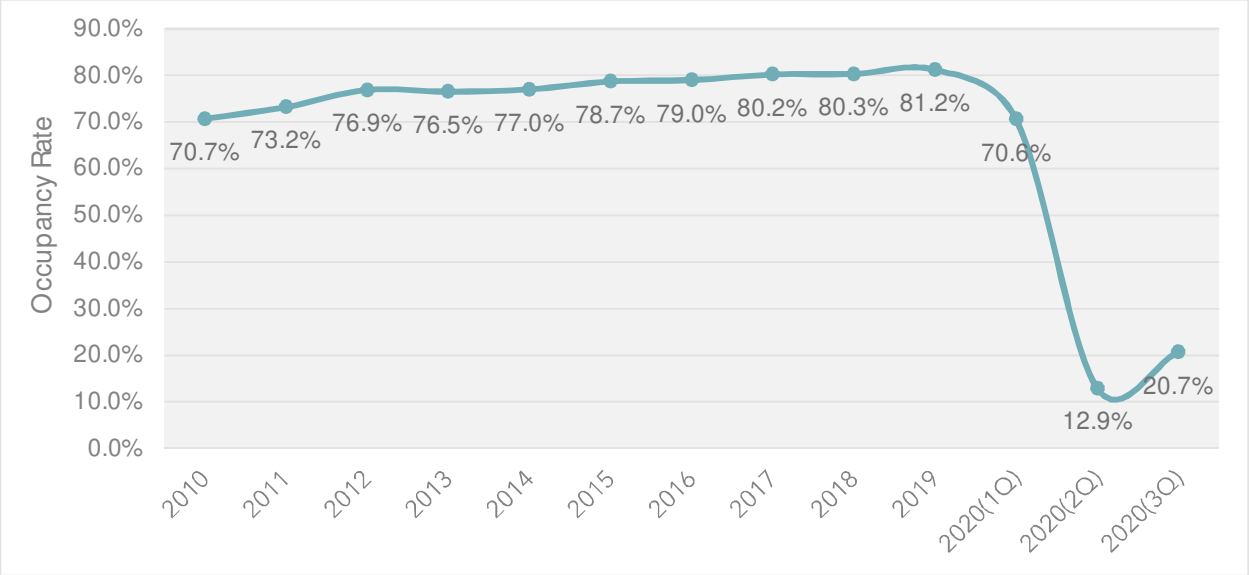
While companies are highly likely to retain space to support collaboration, it is unlikely to return to the same format prior to the COVID-19 pandemic. Now that companies know that their employees can work remotely, it is expected that many will offer this as a benefit moving forward. The results in the longer-term may be a reduced amount of space that a company needs. Organizations had already been shrinking their space foot prints so they had less than one desk per person and the COVID-19 pandemic is likely to accelerate that. What makes this situation unique is that while companies were previously shrinking their space per employee, they now may seek more space per employee, but with fewer people occupying the office.

Hospitality

This section provides performance trends for reporting hotel properties across the state of Hawaii. Base data was provided by the State of Hawaii's Department of Business, Economic Development and Tourism. The impact of COVID-19 has significantly impacted Hawaii's tourism industry. Domestic and visitor arrivals continued to decrease into the third-quarter of 2020. According to the State Department, the total number of visitor arrivals by air decreased 2.5 million, or 97.6%, in the third-quarter 2020, compared to the same quarter of 2019. Total visitor arrivals on domestic flights decreased 1.8 million or 96.8% compared to the same quarter of 2019. International visitor arrivals decreased 99.6% over the last year.

The reduction in arrivals has resulted in staggering declines in occupancy rates for hotels across the State. The statewide hotel occupancy rate averaged 20.7% in third quarter; 62.1 percentage points lower than the same quarter of 2019. Historically, hotel occupancy rates in Hawaii increased year-over-year, from 70.7% at year-end 2010 to 81.2% in 2019. Although occupancy increased between second quarter and third quarter 2020, the current measure remains considerably lower than long-term averages (Graph 19).

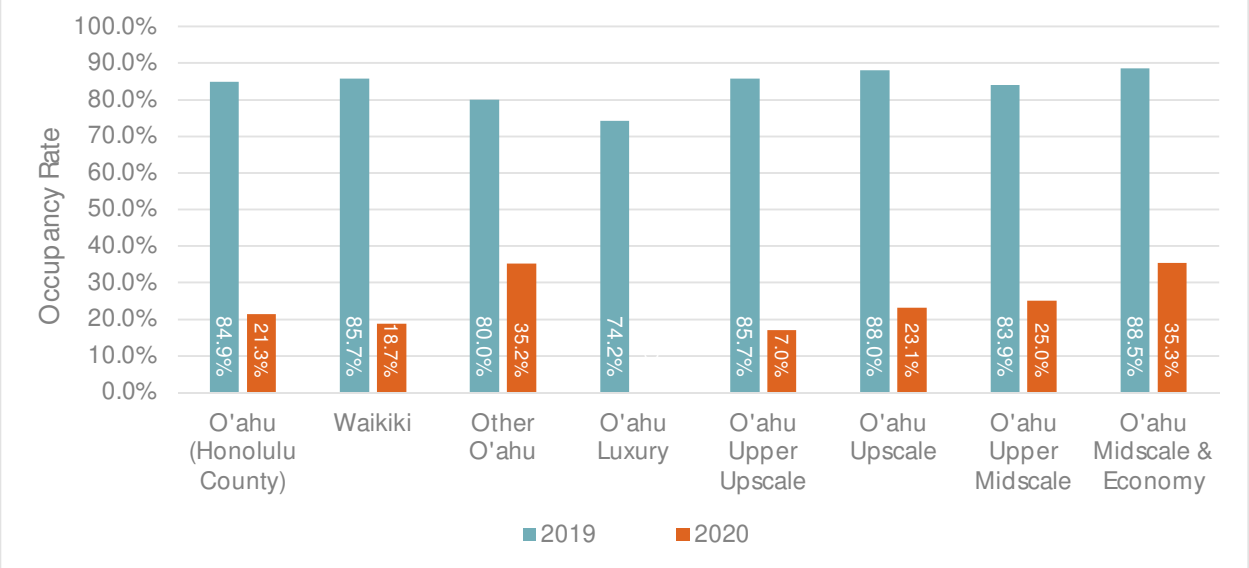
Graph 19: Hotel Occupancy Rate Trends, State of Hawaii, 2010-2020



Source: State of Hawaii Department of Business, Economic Development and Tourism

Hawaii Tourism Authority releases quarterly hotel performance reports that provides another level of detail, braking out performance by area. The Tourism Authority's data is provided by STR Global, a third-party hospitality data source. Honolulu County has a September 2020 occupancy rate of 21.3%, notably down from 84.9% one year prior. As shown on Graph 20, of the different product types, Midscale and Economy properties have the highest average occupancy rate as of September 2020 at 35.3%, followed by Upper Midscale (25.0%). In general, the higher the price point of the hotel, the lower the current occupancy.

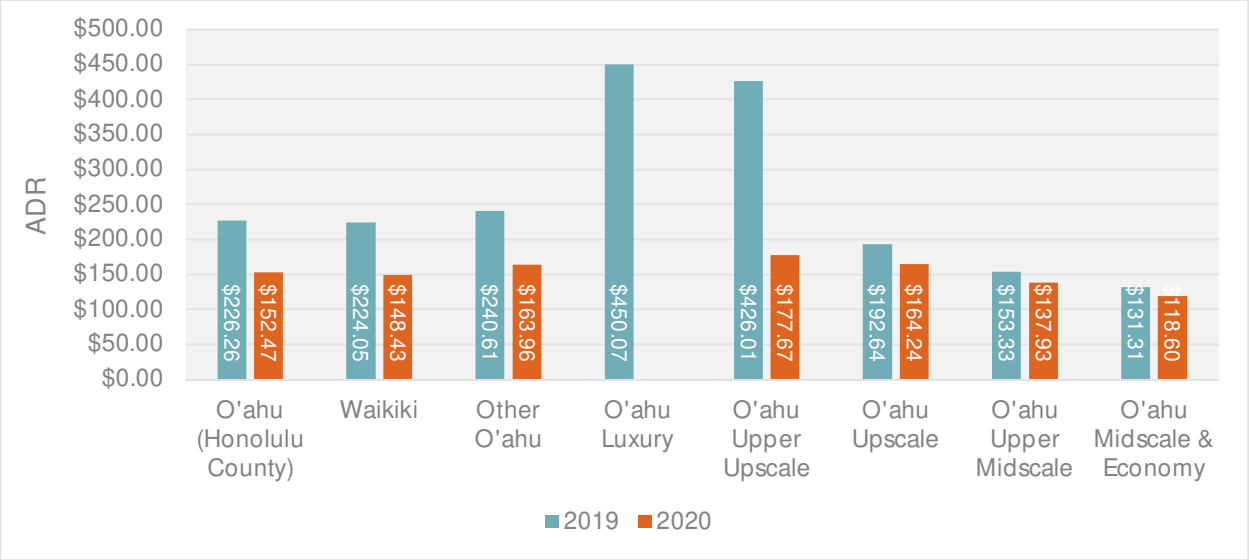
Graph 20: Comparison of Hotel Occupancy Rates by Type, Honolulu County, 2019-2020



Source: Hawaii Tourism Authority; STR Global

Average daily rate (ADR) is the room revenue divided by the total rooms sold. The measure is displayed as the average rental rate for a single room. Consistent with trends demonstrated for occupancy, ADR measures were severely impacted by the COVID-19 pandemic as hotels cut rates to attract a more limited customer base with restricted travel. As shown in Graph 21, the ADR in Honolulu County was $152.47 in September 2020, compared to $226.26 at the same time last year.

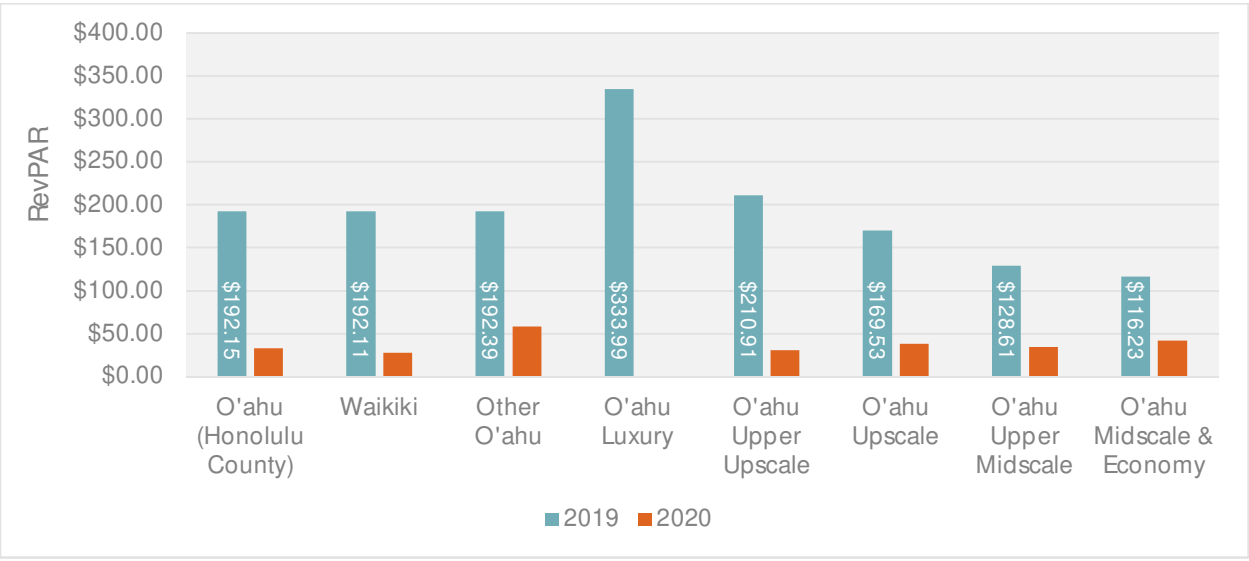
Graph 21: Comparison of Hotel ADR by Type, Honolulu County, 2019-2020



Source: Hawaii Tourism Authority; STR Global

Graph 22 demonstrates the trend in revenue per available room, or RevPAR, in Honolulu County from 2019-2020. RevPAR is defined as room revenue divided by the number of rooms available. Hoteliers rely on RevPAR to strike a performance balance between occupancy and rate.

Graph 22: Comparison of Hotel Occupancy RevPAR by Type, Honolulu County, 2019-2020



Source: Hawaii Tourism Authority; STR Global

COVID-19 and Hospitality

Hospitality is inarguably one of the most impacted real estate sectors through the COVID-19 pandemic. According to the American Hotel & Lodging Association (AHLA) nearly nine in 10 hotels have been forced to lay off or furlough employees during the pandemic. As part of a survey of major hotel chains, AHLA found that more than half of the 600 owners that responded indicated that they were in danger of losing their property to foreclosure by commercial real estate lenders.

National real estate research firms forecast that recover for the hospitality industry could extend well into 2023 as travelers and businesses slowly regain confidence in safe movement around the country. The summer months brought some limited relief to well-located hotels located in high-tourism markets as people began to seek out weekend travel. Economy hotels are also expected to have a smoother recovery, targeting customers that have had limited interruptions to their daily lives like truck drivers and extended-stay guests. Professional business travel may never fully recover to pre-COVID levels as corporations have pivoted to virtual meetings.

Ultimately, travel will return, but recovery in the hospitality industry is expected to take longer than in other real estate sectors and will vary dramatically across segments. Hotel chains will have to make notable improvements to heighten the level of hygiene and flexibility to meet customer expectations.

ALA MOANA TRANSIT CENTER OPPORTUNITIES

This section presents key opportunities for the Ala Moana Transit Center site, including captures of Study Area demand and development patterns. This information will be closely considered during the alternatives analysis phase to create a vision for the property that is based in market-reality that fosters success and joint development opportunities.

Demand Allocation Summary

This analysis relies on demand projections prepared as part of the Honolulu TOD Demand Analysis and Market Projections, prepared by Strategic Economics in 2019. Projections and allocation by real estate sector were prepared for each one-half mile station area for the entire transit corridor. Ala Moana was grouped with two other station areas, Kakaako and Civic Center. According to the TOD Demand Analysis methodology, groupings were created based on similarities in land use context, location and distance from each other, and market dynamics. The numbers presented below represent forecasted demand for three station areas in the grouping through 2040.

The Ala Moana, Kakaako, and Civic Center station areas could support a variety of land uses through the 20+ year forecast horizon. These allocations are leveraged in this analysis to inform opportunities for the Ala Moana Transit Center, a specific property with the Ala Moana Study Area. The forecasts help to inform competitive real estate sectors at the Transit Center property and support market opportunities that are based in market reality.

Real Estate Demand Summary (2018-2040)

MULTIFAMILY	RETAIL	OFFICE	HOSPITALITY
6,302 - 6,823 units	259.6 –320.3 K square feet	289.7 - 327.7 K square feet	1,034 –1,826 keys

Source: Strategic Economics

Opportunities by Real Estate Sector

Multifamily Residential

Multifamily residential represents the strongest development opportunity for the Ala Moana Transit Center. The Transit Center presents a unique opportunity to leverage private mixed-use development as part of a multimodal transportation center. The Ala Moana district is a high-value residential area given its location with proximity to the waterfront, the Ala Moana Center, the Convention Center, and, in the future, a transit station that will connect the area to the downtown job center. The target market for new residential units in

the area includes households on both ends of the age spectrum, young professionals seeking a home near jobs, shopping, dining, and nightlife, as well as active adults who want to downsize.

Through 2040, Strategic Economics forecasted residential demand of 6,300 to 6,800 residential units beyond what has been identified as currently in the pipeline. Given the size, access, and visibility of the Transit Center site, the project would be well-positioned to capture a portion of the future demand. New condominium projects in the area generally range in size from 300 to 500 units, which represents 5.0% to 7.0% of the total demand forecasted for the three station areas in the defined grouping.

A review of both condominium and apartment opportunities in the Study Area leans towards a for-sale product, although either would be appropriate. Tapestry Segmentation Analysis indicates that the three largest segments of residents in the Study Area have an affinity for multifamily rental housing, as many are young and comparatively more transient. It should be noted that the property also presents a key opportunity to incorporate affordable housing in a high-price area. The Central condominium project, adjacent to the site has a proposed mix of 60% affordable and 40% market-rate. Incorporating affordable units on the site would offer premium access to transit to households of a wide array of income levels.

Projected Multifamily Site Demand: 300-500 units

Retail

As demonstrated by the reduced level of new completions in the region in recent years, investment and development opportunities for retail are still slow, ranking the lowest of all major sectors nationally. Retail is currently one of the most volatile sectors, undergoing a significant evolution based on a macro-level shift in shopper preferences and changes to how goods are viewed and delivered. The significance of online shopping is a dominant influencer in how retail is changing across the United States. The COVID-19 pandemic has accelerated these trends giving more advantage to online shopping as stores were shuttered to promote social distancing.

Although online sales have grown significantly in the last 15 years, it is important to note that most non-grocery sales still take place in brick-and-mortar stores. This is likely to continue to recover over the next six to 12 months. Recent research shows that while many customers shop and compare online, they often opt to make their final purchases in-person. Recovery through and following the pandemic is expected to favor retail experiences that offer entertainment and dining, particularly those with outdoor spaces to allow for social distancing.

Performance of retail centers varies widely, depending on product type and location. Retail sectors demonstrating strong performance include grocery anchored neighborhood centers and lifestyle/entertainment centers. Two of the three top center types reflect a movement towards mixed- or

multi-use development patterns. Enclosed malls and unanchored centers, however, continue to show declines.

Hosting the Ala Moana Center, the Study Area is a major retail activity center for Honolulu County. The Strategic Economics analysis forecasted future demand at approximately 260,000 to 320,000 square feet through 2040. The Ala Moana Transit Center, located immediately across Kapiolani Boulevard from the Ala Moana Center, would be best served to focus on-site retail on small-scale suites that directly serve transit users. The future square footage would likely be divided between street-level retail suites at the base of the Transit Center, as well as opportunities inside the Center itself.

Projected Retail Site Demand: <25,000 square feet

Office

Like multifamily residential, well-located office space is experiencing a resurgence across the nation. Office space located in mixed-use projects near multimodal transit has achieved success in attracting talent-seeking companies and young, educated workers. Tenants expect their employees to be more satisfied in places that offer diverse, connected land uses, including proximity to cafes, restaurants, retail shops, personal and business services, hospitality, and civic uses. These companies anticipate higher productivity, less turnover, and more innovation as a result of a well-designed, integrated development pattern.

There has been no new office development in the Study Area in the last two decades. Existing office space in the Study Area performs better when compared to Honolulu County, with higher average rents per square foot and lower vacancy rates. According to the Demand Allocation Study prepared by Strategic Economics, the Ala Moana, Kakaako, and Civic Center station areas are projected to be able to support between 290,000 and 328,000 square feet of office space through 2040. Demand for office development is expected to be a longer-term play for the Ala Moana station area. Given the timing of the Transit Center development, the office market will likely be too soft to support new development and this product type will not compete well when compared to a residential alternative. As such, no office space is recommended for the Transit Center site.

Hotel

According to the Demand Allocation Study prepared by Strategic Economics, the Ala Moana, Kakaako, and Civic Center station areas are projected to be able to support between 1,000 and 1,800 hotel rooms through 2040. This demand would likely gravitate to the two other station areas (or elsewhere in the Ala Moana Study Area) as the economy improves from the COVID-19 pandemic and travel and tourism recover. Given the strong performance of the residential sector, it will perform better at the site and present a strong opportunity than a hospitality use. No hotel rooms are recommended for the Transit Center site.

APPENDIX B

Precedent Study

Ala Moana Transit Center Alternatives Analysis
PRECEDENT STUDY | Draft 10/23/2020

Agency/ City	Collaborations	Document Name	Type: Plan/ Project/ Policy/ Study	Year	Source	Theme	Primary Notes	Secondary Notes
Oahu MPO		Oahu Regional Transportation Plan 2040	Plan	Apr-16	City of Honolulu	All Modes	The objective of the Oahu Regional Transportation Plan (ORTP) is to guide the development of transportation infrastructure on the island through the year 2040. It presents both a vision of an improved transportation system to serve the needs of Oahu's population as well as specific projects that will achieve that vision.	Sustainable Transportation Solutions: - Providing non-automobile transportation alternatives between Kapolei and Ewa to Downtown Honolulu and the Ala Moana Shopping Center promotes accessibility, reduces congestion and air pollution, and supports the economy. By supporting the continued development of bicycle routes and lanes and the purchase of additional buses, vans, and shuttles, ORTP 2040 provides more affordable transportation choices that minimize energy consumption and promote healthy lifestyles. Transit Projects: - The guideway (rail transit) will connect the major employment and residential areas of Kapolei and Ewa to Downtown Honolulu and the Ala Moana Shopping Center. - Plan, design, and construct an elevated fixed-guideway system between Ala Moana and UH-Manoa and Waikiki.
City and County of Honolulu		O'ahu General Plan 2017	Plan	Dec-17	http://honoluludpp.org/Portals/0/pdfs/planning/generalplan/GPUpdate/PR%20GP_web.pdf	All Modes	The General Plan for the City and County of Honolulu is a comprehensive statement of objectives and policies which sets forth the long-range aspirations for O'ahu and the strategies to achieve them. It lays the foundation for a comprehensive planning process that addresses physical, social, cultural, economic and environmental concerns affecting the City and County of Honolulu.	Objective A - To create a multi-modal transportation system which moves people and goods safely, efficiently, and at a reasonable cots and minimizes fossil fuel consumption and greenhouse emissions; serves all users, including limited income, elderly and disabled populations; and is integrated with existing and planned development.
City and County of Honolulu		O'ahu Bike Plan Update 2019	Plan	Dec-19	https://www.honolulu.gov/rep/site/dts/bike_docs/OBP_Final_2019_Oahu_Bike_Plan_Update.pdf	Bicycle	The 2019 O'ahu Bike Plan update builds off the foundation provided in the 2012 Plan. This 2019 O'ahu Bike Plan Update will guide the continued growth of bicycling as a safe, convenient, affordable, healthy and fun transportation option.	Proposed bike lanes: Kapiolani Blvd - Protected Bike Lane - Priority 1 Keeaumoku St - Protected Bike Lane - Priority 1 Piikoi St - Protected Bike Lane - Priority 1 Makaloa St - Bike Lane - Priority 1 Kaheka St - Bike Lane - Priority 1 Mahukona St - Bike Lane - Priority 2 Ala Moana Blvd - Bike Lane - Priority 1 Atkinson Dr - Bike Lane - Priority 2 Bike Stations: Ala Moana Blvd & Atkinson Dr Kapiolani Blvd & Keeaumoku St Makaloa St & Keeaumoku St Waimanu St & Piikoi St
City DTS/DDC, Hawaii DOT	Hawaii Bicycling League	Bike Network 2020	Project	2020	https://www.hbl.org/2020bikeways/	Bicycle	The Hawaii Bicycling League is an advocacy group that advances projects for bikeway implementation. Their goal is to set a stage for a bikeway network that focuses on developing 13.5 miles of new paths, protected bike lanes, and bike lanes in 2020. The literature describes each bikeway project and gives information of the involved agency, length, network connections, etc.	Alakea St protected bike lane (Downtown) Auahi St protected bike lane (Kakaako) Bishop St protected bike lane (Downtown) Cooke St bike lanes (Kakaako) Fort Barrette Rd shared-use path (Kapolei) Fort Weaver Rd bike lanes (Ewa) Goodale Ave shared-use path (Waialua) Kamakee St protected bike lanes (Kakaako) King St extension protected bike lane extension (Downtown) Kualakai Pkwy shared-use path (Ewa, Kapolei) Leeward Bikeway (Waipahu, West Loch, Ewa) Leeward Community College connector (Pearl City) Nuuanu Ave bikeway (Nuuanu, Downtown) Pensacola St protected bike lanes – (Makiki, Ala Moana) Pohukaina St/Kanani St bike lanes (Kakaako) Punchbowl St protected bike lane (Downtown) Richards St bike lanes (Downtown) Ward Ave protected bike lanes (Kakaako)
City and County of Honolulu		O'ahu Pedestrian Plan	Plan		http://www.honolulu.gov/completestreets/pedplan	Pedestrian	The Oahu Pedestrian Plan is a long-term action plan to create vibrant, safe, and accessible streets to enable those of all ages and abilities to get around safely and comfortably by walking. The objective of the Plan is to define the City and County of Honolulu's actions to make the street network more walkable, in support of healthy and livable communities.	The Oahu Pedestrian Plan involves inventorying existing pedestrian conditions, identifying pedestrian safety issues, proposing pedestrian improvement projects and programs, and prioritizing those improvements to facilitate walking and multimodal travel consistent with the City and County of Honolulu's Complete Streets approach. The Pedestrian Priority Network is currently being drafted. It includes input from public meetings, community/pop-up events, and online submissions. The plan is outreach driven and uses the input to understand pedestrian issues, needs, and community priorities.
City and County of Honolulu		Honolulu Complete Streets Design Manual	Design Manual	Sep-16	http://www4.honolulu.gov/docushare/dsweb/Get/Document-187742/160908%20Honolulu%20Complete%20Streets%20Design%20Manual_Final.pdf	Complete Streets	This design manual provides street planning guidance that adheres to the state's complete street related legislature, policies, and requirements. This manual is for use by City and County of Honolulu staff, design professionals, private developers, community groups, and others involved in the planning and design of City and County of Honolulu streets.	The complete streets policy and principles consist of ten objectives: "(1) Improve safety; (2) Apply a context sensitive solution process that integrates community context and the surrounding environment, including land use; (3) Protect and promote accessibility and mobility for all; (4) Balance the needs and comfort of all modes and users; (5) Encourage consistent use of national industry best practice guidelines to select complete streets design elements; (6) Improve energy efficiency in travel and mitigate vehicle emissions by providing nonmotorized transportation options; (7) Encourage opportunities for physical activity and recognize the health benefits of an active lifestyle; (8) Recognize complete streets as a long-term investment that can save money over time; (9) Build partnerships with stakeholders and organizations statewide; (10) Incorporate trees and landscaping as integral components of complete streets."
City and County of Honolulu	HHF Planners	Ke'eaumoku Complete Streets	Project	Ongoing	City of Honolulu	Complete Streets	Kickoff meeting was in July 2020 and the project is ongoing.	
TheBus (City and County of Honolulu)		TheBus 2019 System Map	Map	Jul-05	City of Honolulu		Honolulu area system map and transit guide. Outlines buses relevant to Ala Moana/Waikiki Area. Categorizes bus services by frequent urban, major suburban, local, and commute routes. Also maps out rapid transit and local facilities/attractions/"Places to Go"	TheBus Routes around Ala Moana District: 1, 1L, 2, 3, 5, 6, 8, 13, 17, 18, 19, 20, 23, 24, 40A, 42, 52, 53, 55, 56, 57, 57A, 62, 65, 83, 84, 84A, 85, 85A, 88, 88A, 90, 98A, 201, 202, 203, C, E

Agency/ City	Collaborations	Document Name	Type: Plan/ Project/ Policy/ Study	Year	Source	Theme	Primary Notes	Secondary Notes
Honolulu Authority for Rapid Transportation		Bus/Rail Integration Plan for Ala Moana Center Station	Plan	Apr-14	City of Honolulu	Bus/Rail	The focus of the BRIP is a set of recommended bus-related facilities to compliment the rail project. The integration plan also provides supporting information for these facilities, including expected route-specific bus volumes at each station. The following items are included in each bus/rail integration plan: - Location of bus stops at each station, both on-street and, in some cases, at off-street transit centers. - Assignment of bus routes to reflect the alignments and passenger volumes of each route serving project stations, as well as characteristics of roadway facilities. - Size and operational characteristics of bus stops that reflect the types of buses expected to be assigned to routes serving project stations. - Location of stops for TheHandi-Van vehicles. - Locations in station areas for wayfinding signage to provide directions for those riders transferring between bus and rail. - Location and number of spaces for bicycle parking.	**Bus Services** - The 22 routes serving the AMC station area will generate 99 total bus trips in the peak hour; however, three routes will account for 43 trips or over 50 percent of total peak hour bus volumes at the station (Route 7X, Route 8A, and Route 8B). There are multiple route changes, new bus routes, and potential future service changes serving the AMC station area to keep in mind, including a potential improved connection between the AMC area and the McCully and Moili'ili neighborhoods. **Bus Staging Area** - A potential bus staging area, located about one-quarter mile from the bus stops on Kona Street, will allow buses to expeditiously start service in order to maintain their schedules. A later iteration of PE identified a parcel as an opportunity for a new street connecting Kona and Waimanu Streets. The concept has merit as a solution to preclude long deadhead times for AMC originating buses but was not formally identified in the FEIS. **Pedestrian Access** - A pedestrian connection from the makai (ocean) side of the station concourse to Ala Moana Shopping Center will be provided. Well-marked paths through the parking garage to the mall, as well as the 'Ewa Wing expansion, will be crucial. On the mauka (mountain) side of the station, a concourse-level pedestrian connection from the station to the proposed Samkoo Condominium development has been identified. Crosswalks are currently available for movement across Kapiolani and Ala Moana Boulevards and will be enhanced to be wider and have pedestrian activated signals. A wayfinding signage system should be installed to address issues of pedestrian access between on-street bus stops and station entrances. **Bike Sharing Facilities** - The City and County of Honolulu is exploring the provision of bike share stations in the AMC station area. As further design for the AMC Station progresses, coordination should occur for potential bike share. **Other Vehicle Access** - Facilities are already in place in the Ala Moana Shopping Center in the Kona/Pi'ikoi Street parking garage for rideshare/taxi access and will be in place for the rail project opening. The station will also include spaces for bus operation supervisors on the mauka (mountain) side of Kona Street between Kona and Ke'eaumoku Streets.
The Bus (City and County of Honolulu		Windward Redesign Plan: Final Implementation	Plan	2019	http://www.thebus.org/WindwardTheBusRoutes/	Transit	The Windward TheBus Routes Redesign is a comprehensive transit system overhaul plan for a new bus network intended to improve system efficiency, boost ridership, and get transit users to their destinations faster and more reliably. The City reviews bus services to evaluate the current system and, in turn, create a plan to reallocate transit resources and provide new connections to meet changing community needs. 3-Part Implementation: Part 3 – Final Implementation is planned for August 18, 2019. This will include all remaining route modifications and renumbering. Part 2 – Routes 60, 65, and 70 were implemented on June 2, 2019. Part 1 – Peak Express Routes were implemented on March 3, 2019.	Part 2: Completed Sunday, June 2, 2019 • Route 55 was renamed to Route 60. The new Route 60 was modified to use Likelike Highway rather than Pali Highway to avoid AM and PM peak traffic congestion. New service was established along Anoi Road and Luluku Road to improve access to those neighborhoods surrounding those roads. Service along Heeia, Alaloa, and Haiku Streets was discontinued on Route 60, but retained by Route 65. • Route 65 was extended to Ala Moana Center, and Heeia and Alaloa Streets. • Route 70 service to Marine Corps Base Hawaii was eliminated. • Route 77 was renamed to Route 69.
Oahu Transit Services, Inc		Kona Street Closure	Project	Mar-20	City of Honolulu	Transit	The Ala Moana Shopping Center management team needs to control ingress and egress points into the mall area and buses will not be allowed to service any stops along KONA STREET starting on FRIDAY, MARCH 27, 2020, until further notice. Operators should inform passengers of the detour and service all bus stops along the detour route.	Affected routes: 5, 6, 8, 17, 18, 23, 40, 51, 52, 60, 65, 67, C, & E Affected areas: No service at Kona/Kona Iki (Stop #847), Kona/Opp. Keeaumoku (Stop #426 & #760), Mahukona/Atkinson (Stop #427). Document provides detailed detour routes.
	Weslin Consulting	2012 Before and After Study: Fixed Route Passenger Survey	Study	Oct-20	City of Honolulu	Transit	The 2012 study interviewed close to 20,000 fixed route passengers based upon system and ridership characteristics. Of those, 6.9 percent had a stop at Ala Moana Shopping Center (AMC) as part of their trip. Three questions were added to the survey specifically targeting AMC passengers. Those questions and the responses are shown in the Secondary Notes.	Survey results: 55.3% - Only at the center to board a bus 10.5% - At the center to board a bus, but used facilities while waiting 34.1% - At the center to use the AMC facilities
City and County of Honolulu	Belt Collins Hawaii, Fehr & Peers, Keyser Marston Associates	Ala Moana Transit Oriented Development (TOD) Plan	Plan	Apr-16	http://www.honolulu.gov/rep/site/dpptod/alamoana_docs/Ala_Moana_-_Draft_Final_TOD_Plan_Report_042516web.pdf	Transit, Bicycle/Pedestrian	The TOD Plan is intended to serve as a guide for future public improvements and private investment around the Ala Moana district.	Improved pedestrian and bicycle connections should readily link the transit station with major destinations and activity centers such as shopping centers and schools. (1.1.2) Ala Moana's broad range of tourist and local attractions are connected by arterial and collector roads like Kapiolani Boulevard, Keeaumoku Street, and Piikoi Streets. These roadways are generally underdeveloped and lacking features and facilities that will encourage safe pedestrian and cyclist circulation – the area will be the best location for new development and the amenities that support neighborhood revitalization. (1.2.6) The Ala Moana Center station is projected to be the largest boarding station along the entire rail line, with 22,000+ daily boardings anticipated. As most of these arrivals are expected by bus, the integration of rail and bus will be critical. Planning should accommodate improved waiting facilities commensurate with a multimodal transit center for a major urban district. (4) The Public Realm Improvement Concepts propose bicycle and pedestrian-friendly "complete streets" in both the mauka-makai and ewa-diamond head directions along local streets and major corridors, providing more connectivity to surrounding neighborhoods and improved access to the Ala Moana Center station.
City and County of Honolulu	Fehr & Peers	Ala Moana Transit Oriented Development (TOD) Plan - Transportation Analysis Supplement	Plan Supplement	Oct-12	http://www.honolulu.gov/rep/site/dpptod/alamoana_docs/Ala%20MoanaTODTransportation%20Analysis.pdf	Transit, Bicycle/Pedestrian		**Traffic** - In the case of Kapiolani Boulevard, the City and County implements a contra-flow lane with the manual installation of cones to maximize vehicle capacity during the peak direction of travel (Ewa-bound in the morning and Diamond Head-bound in the afternoon). While signals are coordinated on all of these corridors, the high vehicle demand results in regular congestion and queuing at signals, and is sometimes exacerbated by the high pedestrian volumes at selected locations, as well as by less efficient signal phasing (e.g., split phasing where each approach gets its own phase versus overlapping phases). **Parking** - With the exception of Kapiolani Boulevard, Ala Moana Boulevard and Kalakaua Avenue, the majority of the streets in the vicinity of the Ala Moana Station include some on-street parking. Some of the parking is metered, including portions of Kona, Mahukona, Kanunu, Kaheka, Amana, and Poni Streets. **Biking** - In fact there are no separate bicycle facility rights-of-way within the study area serving built up land uses. A bicycle trail is provided through Ala Moana Beach Park, and Queen Street/Waimanu Street between Kamakee and Piikoi Streets is a designated bike route (routes guide bicyclists and they share the street with vehicles but no separate right-of-way is provided). In addition, Young Street is a designated bicycle-friendly road, although it is located mauka of King Street and outside the immediate study area. **Walking** - Portions of the following streets and intersections were identified as having insufficient or missing pedestrian sidewalk/path and infrastructure (see Figure 2): • Kona Street (Ewa of Piikoi Street) • Kalauokaiani Way (mauka of Kapiolani) • Pensacola Street (makai end) • Kona Street and Mahukona Street (intersection is confusing for both drivers and pedestrians)
Federal Transit Administration (FTA)		Federal Transit Administration Guidance on Joint Development	Policy	Aug-20	City of Honolulu	Transit	The purpose of this circular is to provide guidance to recipients on how FTA assistance or real property acquired with FTA assistance may be used for joint development. "Joint development," irrespective of FTA assistance, commonly refers to the coordinated development of public transportation facilities with non-transit development, including commercial and residential development.	

Agency/ City	Collaborations	Document Name	Type: Plan/ Project/ Policy/ Study	Year	Source	Theme	Primary Notes	Secondary Notes
City and County of Honolulu	Keyser Marston Associates, RTKL	Market Opportunities Study	Study	Oct-12	City of Honolulu	Transit	The City and County of Honolulu (City) has initiated preparation of the Ala Moana Neighborhood Transit Oriented Development (TOD) Plan along the planned new elevated transit line in Honolulu. The purpose of the overall assignment is to promote transit oriented land uses and improve neighborhood quality and character of the areas around the transit station. The new 20-mile elevated rail system is planned to connect East Kapolei to Ala Moana Center and will consist of 21 stations. As a general rule, existing development in the ewa area of the island is less intense than in the existing built areas of the "urban" stations. According to the Environmental Impact Statement (EIS), it is projected that the transit line will be built out in 2019, and by 2030 it is estimated that there will be approximately 116,000 annual boardings. This Market Opportunities Study is intended to evaluate the time period from today to the year 2035.	Given the locational strengths of Ala Moana and given the long term pressures of population, tourism and broader growth of the Honolulu economy, over the long term it is likely that there will be both market demand and sufficiently high property values to support the construction of new Transit Oriented Development in the Ala Moana planning area. Recommended Planning Area: Residential: 3,000 units
Brookfield Properties	Austin, Tsutsumi & Associates, Inc.	Traffic Management Plan Ala Moana Plaza	Plan	Jul-20	City of Honolulu	Traffic Impact	This Traffic Management Plan (TMP) proposes transportation management strategies to reduce and minimize the traffic impacts resulting from the proposed Ala Moana Center Residential Tower development (hereinafter referred to as the "Project") located in Honolulu, Hawaii. Current plans include a 225-stall parking structure and a loading area on the ground floor. Access to the Project site will continue to be provided along Piikoi Street (right-out only) and Kona Street (one full access and one ingress only access). Construction of the Project is anticipated to be completed by 2024.	There are two (2) Hui Car Share Stations located within 1/4 mile of the Project site. One is located at Ala Moana center between Foodland Farms and Shirokiya Village Walk and the other is located at Park Lane Ala Moana apartments. <u>Recommendations:</u> - Provide pedestrian and/or vehicle warning devices at the project driveways - Install "NO STOPPING OR STANDING" sign on Kona Street and Piikoi Street along the Project frontage. <u>Transportation Demand Management Strategies:</u> - Unbundled Parking - Bicycle Accommodations - Rideshare Accommodations - Education and Information
Brookfield Properties	Austin, Tsutsumi & Associates, Inc.	Traffic Impact Analysis Report Ala Moana Plaza	Study	Jul-20	City of Honolulu	Traffic Impact	The Project site is located on an approximately 39,370 square-foot lot near Ala Moana Center at the southwest corner of the Piikoi Street/Kona Street intersection. The Project site is currently occupied by various commercial uses with a shared parking lot. The Project proposes to construct a 595-unit residential tower with up to 4,000 square-feet of retail space. Current plans include a 225-stall parking structure and a loading area on the ground floor. Access to the Project site will continue to be provided along Piikoi Street (right-out only) and Kona Street (one full access and one ingress only access). Construction of the Project is anticipated to be completed by 2024.	Construction of the project is anticipated to be completed by 2024. Recommendations for future year 2024 conditions: - Provide a two-stage left-turn for the northbound left-turn at the Kona Street/Project Driveway 2 intersection if it is feasible with the final Honolulu Rail Transit roadway geometrics and acceptable to the City and County of Honolulu. - Install "NO STOPPING OR STANDING" sign on Kona Street and Piikoi Street along the Project frontage.
City and County of Honolulu (Department of Planning and Permitting)	RM Towill Corporation	Interim Planned Development, Transit Application: Ala Moana Plaza	Project	Aug-20	City of Honolulu	Pedestrian	Today, Ala Moana Center is celebrated as the World's largest open-air shopping center. Ala Moana Center provides over 3,000 jobs for Hawaii residents, and 150 of the shopping center's 350 retail tenants are local businesses. Additionally, Ala Moana Center provides over 900 complimentary events per year, including the 4th of July fireworks show, for its 52 million annual visitors. Approximately 47% of mall visitors are tourists and 53% are local residents. The Project will provide a direct pedestrian connection from the proposed tower to the existing Ala Moana Center mauka parking garage to allow residents easy access to and from the shopping center.	
City and County of Honolulu, DTS		Waikiki Regional Circulator Study	Study	Jun-13	https://oahumpo.org/wp-content/uploads/2013/02/Waikiki-Regional-Circulator-Study.pdf	All Modes; Transit Focus	Objectives of Waikiki Regional Circulator Study: 1. Develop a plan that leads toward sustainable public transit service between the future rail terminus at Ala Moana Shopping Center and Waikīkī and address any resulting transit service impacts to McCully, Mō'ili'ili, Kapahulu, and the University of Hawai'i at Mānoa 2. Develop and identify ways to effectively integrate concepts of livable communities into the circulator study 3. Conduct an ongoing stakeholder oversight and public outreach process.	There is no current Waikīkī transportation plan that addresses how pedestrians, bicycles, buses, trucks, taxis and other vehicles are to function safely, efficiently and interactively into the future. There have been such plans in the past. Although the Waikīkī Regional Circulator Study was conceived with a fundamental objective to define a transit service link between the future rail terminus at Ala Moana Center and Waikīkī, it was gradually expanded to include related transportation implications for McCully, Mō'ili'ili, Kapahulu, and the University of Hawai'i at Mānoa; for all modes of transportation; and, for the livability of those areas.
City and County of Honolulu, DTS	AECOM, Weslin	Waikiki Area Transit Catalytic Improvement Project (WATCIP)	Project	Ongoing	https://www.weslin.net/projects/watcip	Transit	To refine and delineate optimum routing for the Waikiki Regional Circulator (Circulator), to identify street/traffic related improvements for optimal operations, to refine stop locations and identify constraints, to identify relocated local bus and private operations, and recommend fare collection and other Circulator stop amenities.	
City and County of Honolulu, DTS	AECOM, Weslin	Waikiki Area Transit Catalytic Improvements Project (WATCIP) Pedestrian and Bicycle Amenities Technical Memorandum	Project	Apr-18	City of Honolulu	Pedestrian/Bicycle	The primary purpose of the Waikīkī Connector is to develop a strong link between Ala Moana Center and Waikīkī. The WRCS also considered ways to move Waikīkī toward a more appealing, livable and pedestrian-oriented environment reflective of its unique heritage. The memorandum focuses on bikesharing and pedestrian connections as important livable community features. Bikeshare enables multi-modal transportation between walking, biking, and transit and can serve as the last mile connectivity for commuters. Bikeshare Hawaii anticipates 2.5 rides per bike per day. The inclusion of "Pedestrian-Friendly-Amenities" is also a high priority concept determined from stakeholder interviews and public workshops to enhance the Waikiki walking experience. There is a need for features that won't require pedestrians and cyclists to travel far out of their way and wait for signals from multiple crosswalks.	• An elevated pedestrian/bicycle crossing of Ala Moana Boulevard connecting the Ala Wai Promenade, Ala Moana Park's interior pathway and the end of the existing elevated pedestrian pathway adjacent to the Modern and Ilikai hotels. • An elevated pedestrian/bicycle crossing of Kalākaua Avenue and McCully connecting the Ala Wai Promenade with the makai Ala Wai Boulevard pathway. • Twin pedestrian/bicycle bridge crossings across the Ala Wai canal. One at a location aligned with a University Avenue/Kalaimoku Street/Saratoga Road mauka/makai pedestrian/bicycle corridor providing a connection to the Diamond Head terminus of Baseline B. The second aligned with a Seaside Avenue mauka/makai corridor connecting with bus stops planned for Baseline A along both sides of Kūhiō Avenue. • An elevated pedestrian/bicycle crossing of Kapahulu Avenue connecting the Ala Wai pathway with the Paki pathway and the Kapahulu/Date pathway. • An elevated pedestrian/bicycle crossing of Monsarrat Avenue connecting the interior pathway around Kapi'olani Park to the network
City and County of Honolulu, DTS	AECOM, Weslin	Waikiki Area Transit Catalytic Improvements Project (WATCIP) Traffic Operations Improvements and Constraints Technical Memorandum	Project	Apr-18	City of Honolulu	Transit		KALĀKAUA AVENUE/KAPI'OLANI BOULEVARD INTERSECTION Going from Waikiki to Ala Moana Shopping Center, the preferred Waikiki Regional Circulator bus route needs to make a mauka-bound left turn from Kalākaua Avenue to Kapi'olani Boulevard. However, the left turning movement at this intersection during PM peak hours is currently prohibited. This study was tasked to investigate the feasibility of lifting the left turn ban so that the preferred Waikiki Regional Circulator bus route becomes practical. This will involve either allowing this left turn for bus-only or allowing for all vehicles.
Honolulu Authority for Rapid Transportation, US Department of Transportation		Honolulu Rail Transit (HRT) Final Supplemental Environmental Impact Statement	Project	Sep-13	http://www.honolulutraffic.com/FSEIS.pdf	Transit	The purpose of the Honolulu [Rail Transit] Project is to provide high-capacity rapid transit in the highly congested east-west transportation corridor between Kapolei and UH Mānoa, as specified in the O'ahu Regional Transportation Plan 2030 (ORTP) (O'ahu MPO 2007). The project is intended to provide faster, more reliable public transportation service in the study corridor than can be achieved with buses operating in congested mixed-flow traffic, to provide reliable mobility in areas of the study corridor where people of limited income and an aging population live, and to serve rapidly developing areas of the study corridor. The project also will provide additional transit capacity, an alternative to private automobile travel, and improve transit links within the study corridor. Implementation of the project, in conjunction with other improvements included in the ORTP, will moderate anticipated traffic congestion in the study corridor. The project also supports the goals of the Honolulu General Plan and the ORTP by serving areas designated for urban growth.	Needs for Transit Improvements - Improve corridor mobility - Improve corridor travel reliability - Improve access to planned development to support City policy to develop a second urban center - Improve transportation equity

Agency/ City	Collaborations	Document Name	Type: Plan/ Project/ Policy/ Study	Year	Source	Theme	Primary Notes	Secondary Notes
Honolulu Authority for Rapid Transportation, US Department of Transportation		HART Revised Recovery Plan of 2018	Plan	2019	http://hartdocs.honolulu.gov/docushare/dsweb/Get/Document-22779/20190516-hart-2018-revised-recovery-plan.pdf	Transit	This Recovery Plan further demonstrates that HART has diligently developed and established management structures, controls, and procedures that are as important to the completion of the Rail Project. The Recovery Plan details HART's core competencies and the development and implementation of critical project management, risk management, and cost and schedule controls that are essential to the recovery of this Project. HART also continues to proactively evaluate additional opportunities to reduce Project cost. The purpose of the Recovery Plan is to address key changes to the Project that have occurred since the prior plans were submitted in 2017.	Ala Moana Transit Center Major existing trunk routes will see service frequency and span increases. Additionally, rapid bus services to connect this station to Waikiki, UH Manoa, and East Honolulu will be implemented with community circulators connecting this station to Makiki, Manoa, and Mo'ili'ili. Major service increases are planned including new routes and increases in existing routes frequencies and spans of service. DTS is planning two bus transit centers adjacent to the station to facilitate anticipated high rates of transfers and pedestrian walk-up passengers. A major bus rapid transit project is planned to connect the terminus of the rail alignment to the high population- and job-density destination of Waikiki.
City and County of Honolulu, DTS		Honolulu High-Capacity Transit Corridor Project (Alternatives Analysis Report)	Project	Nov-06	City of Honolulu	Transit/Multimodal	The purpose of the Honolulu High-Capacity Transit Corridor Project is to provide improved mobility for persons traveling in the highly congested east-west transportation corridor between Kapolei and UH Manoa. Motorists currently face substantial traffic congestion and delay throughout the week, and it's only expected to grow moving forward as the population grows. The document proposes four alternatives based on the field review, population analysis, technology mode literature review, and previously completed studies.	The alternatives considered and ultimately chosen was an initial step in the Rail Transit Project.
City and County of Honolulu		Primary Urban Center Development Plan	Plan	Jun-04	City of Honolulu	All modes	The document provides a development plan for the Ewa and Primary Urban Center (two of the eight regions in O'ahu). The plans are intended to guide public policy, decision making, and investment through a 2025 planning horizon as these areas present major opportunities for growth in population and economic activity.	The plan includes a chapter on "land-use and transportation" which provides high-level conceptual guidance for urban planners as it relates to the developments in Ala Moana.
City and County of Honolulu	Wilson Okamoto Corporation	Primary Urban Center Development Plan - Infrastructure Trends (White Paper)	Study	May-18	City of Honolulu	All modes	The purpose of this white paper is to provide a broad discussion of the important issues and trends associated with infrastructure in the PUC, including the transportation system, and the major wet utility infrastructure systems of water, wastewater, and drainage. This paper provides an overview of the transportation system in the PUC that includes the major roadway systems, traffic operations, and Complete Streets and multimodal initiatives targeted by the City and County of Honolulu; it incorporates known existing and anticipated operational deficiencies, future roadway and multimodal planning efforts, and other future transportation improvements. This paper also identifies existing and potential deficiencies of each major wet utility infrastructure system, past and present system planning efforts, and major wet utility infrastructure improvements currently planned or identified. The information presented in this paper is limited in scope and is intended for use in the regional planning process to update the PUC DP.	Key Transportation Issues in the PUC **Increasing Congestion** - Although increasing roadway capacity might have been a viable solution in the past, it is no longer feasible in most cases to build new or widen existing highways due to prohibitive costs and the lack of available space. Other strategies such as contraflow lanes, high-occupancy vehicle lanes ("zipper lanes"), and cost-effective operational improvements (e.g. resurfacing, restriping, intersection modifications, etc.) have been implemented to help alleviate the congestion problems to improve traffic flow. A focus on travel demand management (TDM), such as through outreach, promotion and marketing of alternative transportation, employer-based commuter programs, bike sharing, car sharing, and vanpool, has been a key strategy in addressing transportation congestion issues. **System Preservation** - In addition to being one of the most impacted cities for traffic congestion, Honolulu has also ranked high nationally for deteriorated road conditions. One of the major hurdles in maintaining satisfactory roadway conditions has been the lack of adequate funding. **Safety** - Strategies highlighted in the SHSP to improve safety include legislation and funding, educational and community actions, enforcement, and improved engineering. Other state initiatives to address safety concerns on Hawai'i's roadways have included Walk Wise Hawai'i, Arrive Alive, and the Safe Routes to School program. Specific areas of concern regarding roadway safety identified by O'ahu's residents in the ORTP 2040 planning process included aggressive driving; impaired driving; safety of bicyclists and pedestrians, motorcycles, and mopeds; and reducing traffic-related deaths and injuries. **Climate Change Resiliency** - Transportation facilities are vulnerable to damage caused by severe storms, rising sea levels, and extreme temperatures. Storm surges and increased rainfall intensity from severe storms and rising sea levels leave low-lying infrastructure susceptible to flooding while higher temperatures can accelerate the deterioration of pavement on roads and runways. Vulnerabilities are becoming more pronounced as the frequency of severe events increases and disruptions in the transportation system affect public safety and quality of life. Sea level rise will also pose a growing threat to coastal roadways and access to airport and harbor facilities.
Sea Grant (University of Hawaii)		Primary Urban Center Development Plan - Sea Level Rise and Climate Change (White Paper)	Study	Dec-18	City of Honolulu	Climate Change/Resilience	The intent of this white paper is to provide a summary of key trends, hazards, and vulnerabilities, and planning considerations related to sea level rise and climate change in Oahu's Primary Urban Center (PUC)	Portions of Transit Oriented Development (TOD) areas around the new rail line including Pearlridge, Lagoon Drive, Middle Street, Kapālama, Iwilei, Civic Center, Kaka'ako and Ala Moana will face chronic flooding impacts with 3.2 feet of sea level rise if no adaptation measures are implemented.

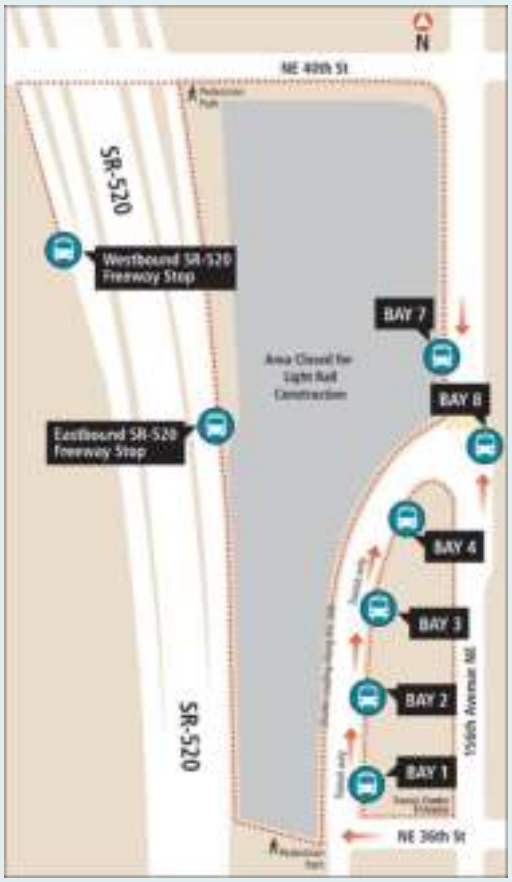
NORTHGATE TRANSIT CENTER – SEATTLE, WA

Design Element		Northgate Transit Center - Seattle, WA
Primary	Off-Street Bus Terminal	- 6 bay bus terminal serving 12 routes: 10 King County Metro and 2 Sound Transit; 736 weekday bus departures; 49 peak hour departures (about one every 1.22 minutes); 4 routes terminate at transit center (TC); layover is located off-site on adjacent NE 100th Street
	On-Street Bus Stops	- 5 on-street bus stops located on adjacent streets, in addition to TC bays serving 5 bus routes, including 3 serving TC
	Bicycle Infrastructure	- 12 bike lockers - $0.05 per hour; bike racks at TC - 2-way protected bike lane, multi-use path, new pedestrian/bicycle bridge crossing I-5 under construction will connect directly into rail station with another ramp down to bike lanes.
	Shared Mobility	Bike lockers operated by BikeLink; bike share operated by Jump with a dockless system; Jump offers electric assist bikes
	Passenger Information	Customer information, pay phones, and a vendor kiosk located at TC
	Pedestrian Access	The new pedestrian/bicycle bridge crossing I-5 will add to a growing pedestrian/bicycle network connecting to multi-use paths, trails, and upgraded pedestrian environment
	First/Last Mile Connection	TC is adjacent to new rail station.
Secondary	Placemaking	Proposed TOD is in design phase
	Residential Development	Adjacent Thornton Place Urban Village with 266 apartments (both market and workforce housing), 121 condos, 143-unit senior living; adjacent to theater, restaurants, shopping
	Other Land Uses	Near Northgate Shopping Mall
	Park & Ride	There are five park-and-ride lots or garages surrounding the TC with about 1,430 parking spaces; some spaces are designated for monthly permits with reduced pricing for HOV
	Rail Information	Sound Transit Light Rail extension due to open in 2021
Land Use		Suburban
Quality and Scale of Transit		Excellent

Images (clockwise from top left): Northgate Transit Center Aerial, Northgate Transit Center, Adjacent Thornton Place Urban Village, Link Light Rail under Construction

OVERLAKE STATION – REDMOND, WA

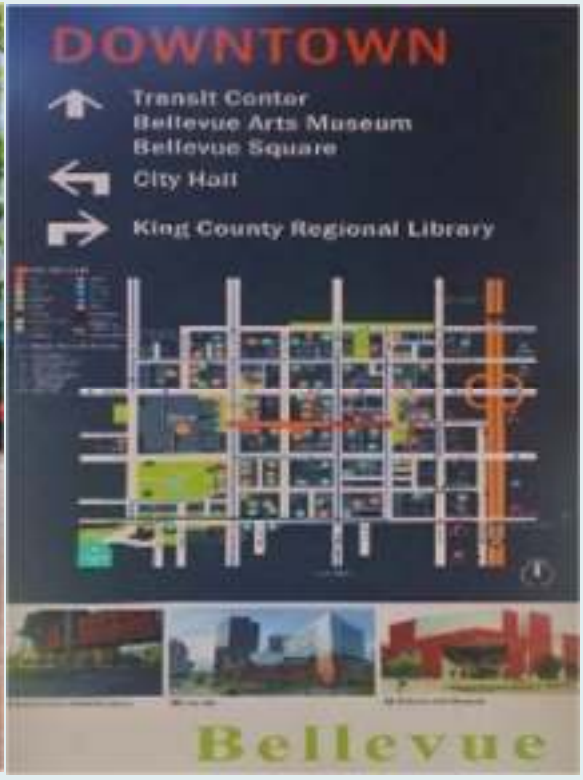
Design Element		Overlake Station - Redmond, WA
Primary	Off-Street Bus Terminal	2 bus layover areas, one active loading zone, 4 bus bays within site; service 6:02 AM to 7:14 PM.
	On-Street Bus Stops	4 bus stops on adjacent streets – 2 stops on 156th Avenue NE & 2 stops on SR-520, serving 16 routes
	Bicycle Infrastructure	• Bike racks are available within the park-and-ride • Bike Station offering repairs, storage, and rentals
	Pedestrian Access	Pedestrian connections to adjacent streets
Secondary	Placemaking	• Surrounding community is redeveloping from low-level business/retail to higher density business • Wayfinding with walking paths identified
	Residential Development	308 apartments - joint development with King County, King County Housing Authority, and private developer; moderate-income rental housing; first transit oriented development (TOD) of its kind in the nation
	Other Land Uses	Surrounding area has major Microsoft campus and supporting businesses
	Park & Ride	203 parking stalls; one electric vehicle charging station
	Rail Information	Sound Transit East Link light rail station to open in 2023 and serve multiple lines
Land Use		Suburban to urban



Source: https://kingcounty.gov/depts/transportation/metro/schedules-maps/maps/boarding/overlake-tc.aspx

BELLEVUE TRANSIT CENTER – BELLEVUE, WA

Design Element		Bellevue Transit Center - Bellevue, WA
Primary	Off-Street Bus Terminal	- 12 bays serving 20 bus routes; paratransit dedicated bay; local, regional, and express services, and limited stop; currently 650 daily departures, 52 peak hour departures; 10 routes temporarily suspended due to COVID-19
	On-Street Bus Stops	- 2 on-street bays serving 3 bus routes and an additional dedicated bay for drop-off
	Bicycle Infrastructure	- Bike racks at Transit Center
	Shared Mobility	Bellevue had a bike share program in 2018-2019 which was discontinued; Bellevue is seeking vendors for service; vendors will be subject to micromobility permit conditions: https://bellevuewa.gov/sites/default/files/media/pdf_document/2020/Bellevue-Shared-Micromobility-Permit-Conditions-20200110.pdf
	Passenger Information	Rider services building on-site as well as on-site supervisor
	Pedestrian Access	Nearby pedestrian plaza
	First/Last Mile Connection	Walking paths, wayfinding throughout Downtown Bellevue Passenger drop-off area at transit center
Secondary	Residential Development	None associated with TC; residential buildings nearby
	Other Land Uses	Business, retail, and within a few blocks of major shopping mall
	Park & Ride	No parking associated with TC; public parking is available in nearby buildings.
	Rail Information	Light rail extension to Bellevue and new rail station is expected to open in 2023.
Land Use		Urban
Quality and Scale of Transit		Excellent



WESTLAKE CENTER – SEATTLE, WA

Design Element		Westlake Center - Seattle, WA
Primary	Off-Street Bus Terminal	- Local and regional buses on-street (61 routes) - South Lake Union Streetcar operates every 10 to 15 minutes from 6:00 AM to 9:00-11:00 PM depending on day of week
	On-Street Bus Stops	- 6 on-street stops serve Westlake Center with 61 routes; South Lake Union Streetcar on-street
	Bicycle Infrastructure	Downtown Seattle has been installing protected bike lanes; the newest facility is the 4th Street two-way protected bike lane
	Shared Mobility	Seattle has dockless bike share vendor
	Passenger Information	Signage, real-time information
	Pedestrian Access	Downtown Seattle is pedestrian-oriented; wayfinding signs throughout downtown
	First/Last Mile Connection	Modes are on multiple levels, with vertical circulation
Secondary	Other Land Uses	• Enclosed shopping center (Brookfield Properties) and office tower opened in 1988 • Major retail, business, entertainment district • Near Convention Center; residential development nearby
	Park & Ride	Parking available in downtown buildings including public parking
	Rail Information	• Rail operates in Downtown Seattle tunnel every 7 to 8 minutes in the peak periods and 15 minutes in the off-peak periods; service is between 4:14 AM and 1:24 AM • Monorail is elevated and operates every 10 minutes between 10:30 AM and 6:30 PM and terminates at Westlake Center
Land Use		Urban
Quality and Scale of Transit		Excellent

Source: https://www.westlakecenter.com

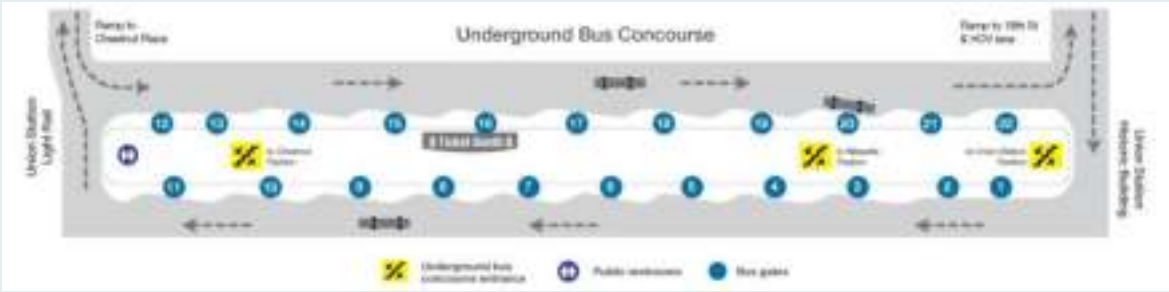
UNION STATION TRANSIT CENTER – DENVER, CO

Design Element		Union Station Transit Center - Denver, CO
Primary	Off-Street Bus Terminal	- 22-bay underground bus facility; 1,000 feet long; a bus departs from Union Station Bus Concourse every 48 seconds during rush hours
	Bicycle Infrastructure	- Bike racks and bike lockers - Bike lanes along Wynkoop Street next to Union Station - The Bike Hub at Union Station - open-air public plaza featuring bike sharing, outdoor seating, and retail; this area will also include outdoor bike parking and rentals, as well as repair stands for professional repair and do-it-yourself repair stands for member use. Inside the 2,800 square-foot building, members will find 160 enclosed bike parking spaces, as well as men's and women's showers and changing-room facilities.
	Shared Mobility	- The half block on Wynkoop Street closest to 17th Street provides a 5-minute passenger loading zone available to private motorists and ride-sharing services; the half-block closest to 16th street provides space for bicycles - Denver B-cycle facility
	Pedestrian Access	Denver Millennium Bridge - located near LoDo, connects 16th Street Mall with the Commons Park in the Central Platte Valley District of the Union Station neighborhood
Secondary	Park & Ride	Central Parking System
	Other Land Uses	Originally opened in 1881 and has been rebuilt in 1914 and 2010-2014; includes boutique hotel, restaurants and retail establishments
	Rail Information	Serves Regional Transportation District (RTD) Light Rail, RT Commuter Rail Line (8-track Commuter Rail Station), and Amtrak Rail Service
Land Use		Urban
Quality and Scale of Transit		Excellent

Source: https://www.travelandleisure.com/travel-guide/denver/things-to-do/denver-union-station

Source: https://www.denver.org/things-to-do/denver-attractions/union-station/

Source: https://www.som.com/projects/denver_union_station



Source: https://www.rtd-denver.com/fastracks/union-station/bus-concourse

KIPLING TRANSIT HUB – TORONTO, ON, CANADA

Design Element		Kipling Transit Hub - Toronto, ON, Canada
General		• "Kipling Transit Hub will include new and improved pedestrian, bicycle and vehicle connections, and integrate subway, GO train, and local and regional bus services, including GO, Toronto Transit Commission (TTC), and MiWay services; when complete, this transit hub in Toronto's west end will help bring more seamless travel choices for commuters • New station entrance building at the base of Subway Crescent Lot • Currently under construction, to be completed in early 2021
Primary	Off -Street Bus Terminal	• 14-bay bus terminal with dedicated access off Subway Crescent Lot • Alternate bus access routes that permit emergency movement between the new and existing bus terminals
	Bicycle Infrastructure	Grade-separated cycle-tracks and pedestrian walkways on both sides of the new Alcorn Avenue driveway
	Pedestrian Access	• Fully accessible pedestrian tunnels connecting the new bus terminal with the GO Station platform and existing Kipling subway station • Main east-west pedestrian walkway connecting bus terminal to existing TCC station • Includes pedestrian bridge over the train tracks –with elevators – to connect the new bus terminal to the GO train platform
Secondary	Park & Ride	• Reorganized commuter parking facilities that provide 230 spots • Reorganized and expanded Passenger Pick-up and Drop-off • Expanded taxi stand
	Rail Information	New, accessible mini platform on the GO train platform
Land Use		Suburban

Source: https://skyrisecities.com/database/projects/kipling-station-transit-hub

Source: https://blog.databid.com/blog/new-major-transit-hub-toronto

BETHESDA METRO CENTER – BETHESDA, MA

Design Element		Bethesda Metro Center - Bethesda, MA
Primary	Off-Street Bus Terminal	- Serves Metrobus (7 Routes), Ride On - Montgomery County (8 routes), and the Bethesda Circulator - 7 bus bays
	Bicycle Infrastructure	- Walking distance to the Bethesda Trolley Trail for cycling to and from Georgetown - Next to the Capital Crescent Trail - 38 bike racks and 44 bike lockers
	Shared Mobility	Bike-share
Secondary	Other Land Uses	- Walking distance to Bethesda Row shopping - Brookfield Bethesda transforming underused Bethesda Metro Center open space; project will create a destination for residents, visitors and Metro riders, including street-facing Metro Commons, pedestrian gallery, shops and cafes in retail promenade, and central lawn
	Park & Ride	None
	Rail Information	- Serves Red Line (subway) of the Washington Metro System - Will serve Purple Line (currently under construction) at street-level - Vertical circulation includes six elevators and a new Red Line mezzanine
Land Use		- Located at the center of a major business district in Montgomery County - One of the busiest Suburban Metro Stations, serving on average 9,142 passengers each weekday in 2017

Source: https://montgomeryplanning.org/planning/transportation/transit-planning/purple-line/purple-line-related-projects/bethesda-metro-station-south-entrance/

Source: https://courbanize.com/projects/bethesda-metro-center/information

Source: https://www.wmata.com/rider-guide/stations/upload/evacuation/60.012.pdf

APPENDIX C

Preliminary (Tier 1) Alternatives Concept Drawings

1A

MOBILTY HUB ON PARCELS 2/3 JOINT DEVELOP-MENT NO PARKING

Legend

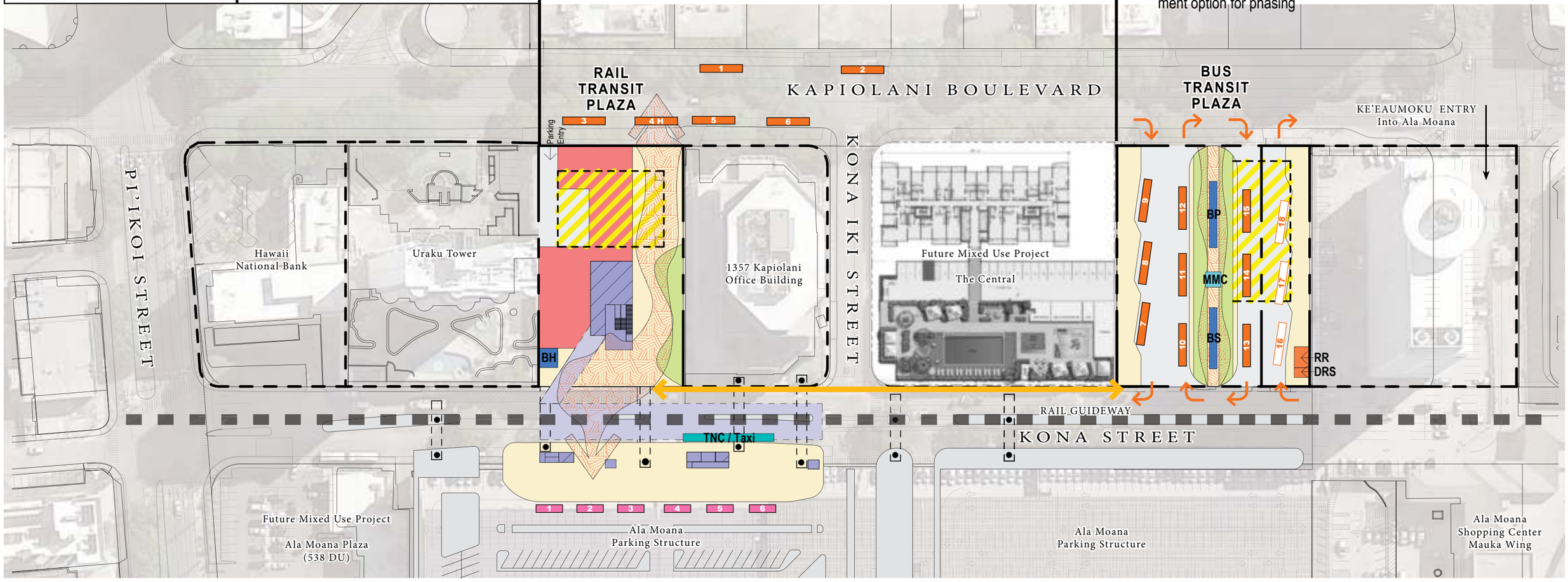
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Kapiolani-Kona Plaza / Mixed Use

- Station touch down location per 2017 plan
- Mixed-use development on Kapiolani Boulevard edge
  - 8,000sf fl oorplate tower; limited parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 6 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#4)
- TNC/Taxi station on Kona Street
- Bus layover/bus staging on City owned parcel at Pensacola Street / Waimanu Street

Parcel 2/3
Bus Hub /Affordable Housing Tower

- Bus transit plaza with affordable housing tower
  - 12,000sf floorplate tower
- Mid-block transit plaza connecting Kapiolani Boulevard/Kona Street
  - Bike racks and bike share
  - Micro mobility corral
  - Bus driver rest station
- 12 bus stops; 2 two-way right-in/right-out access on Kapiolani Boulevard and Kona Street
- Residential tower above with podium deck, no parking
- Parcel 3; 3 bus stops with electric charging equipment as interim development option for phasing



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 1
Tier 1 Alternatives Diagrams
03/10/2021

1B

2-STORY MOBILITY HUB ON PARCELS 2/3

Legend

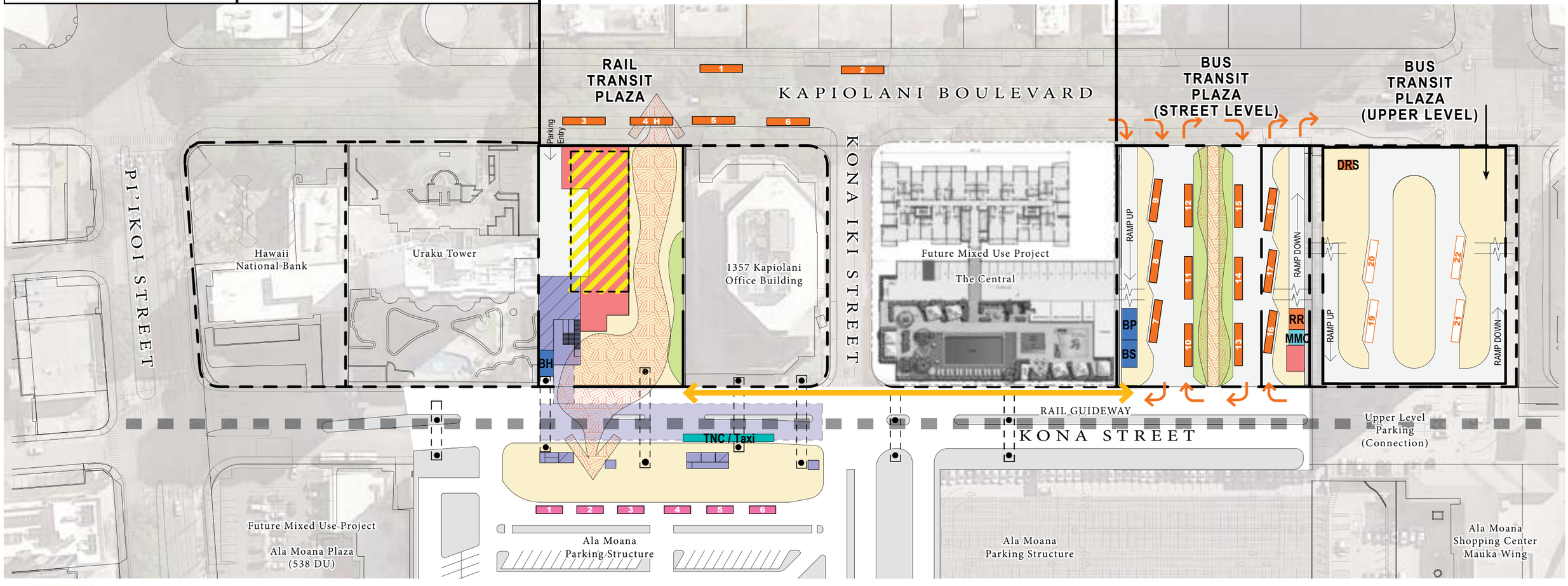
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
Shifted Rail Station / Kapiolani-Kona Plaza / Mixed Use Dev.

- Shifted rail station location
- Mixed-use development with 12,000sf floorplate tower; no parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 6 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#4)
- TNC/Taxi station on Kona Street

Parcel 2/3
Two Level Bus Hub

- No commercial/residential development
- Possible mid-block pedestrian plaza connecting Kapiolani Boulevard / Kona Street
  - Bike racks and bike share
  - Micro mobility corral
  - Potential to create retail kiosks
- 12 bus stops on ground level; 2 two-way right-in/right-out access on Kapiolani Boulevard and Kona Street
- 4 layover bus stops on upper level with driver rest station and electric charging stations



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 2
Tier 1 Alternatives Diagrams
03/10/2021

1C

MOBILITY HUB ON PARCELS 2/3 JOINT DEVELOPMENT W/ PARKING

Legend

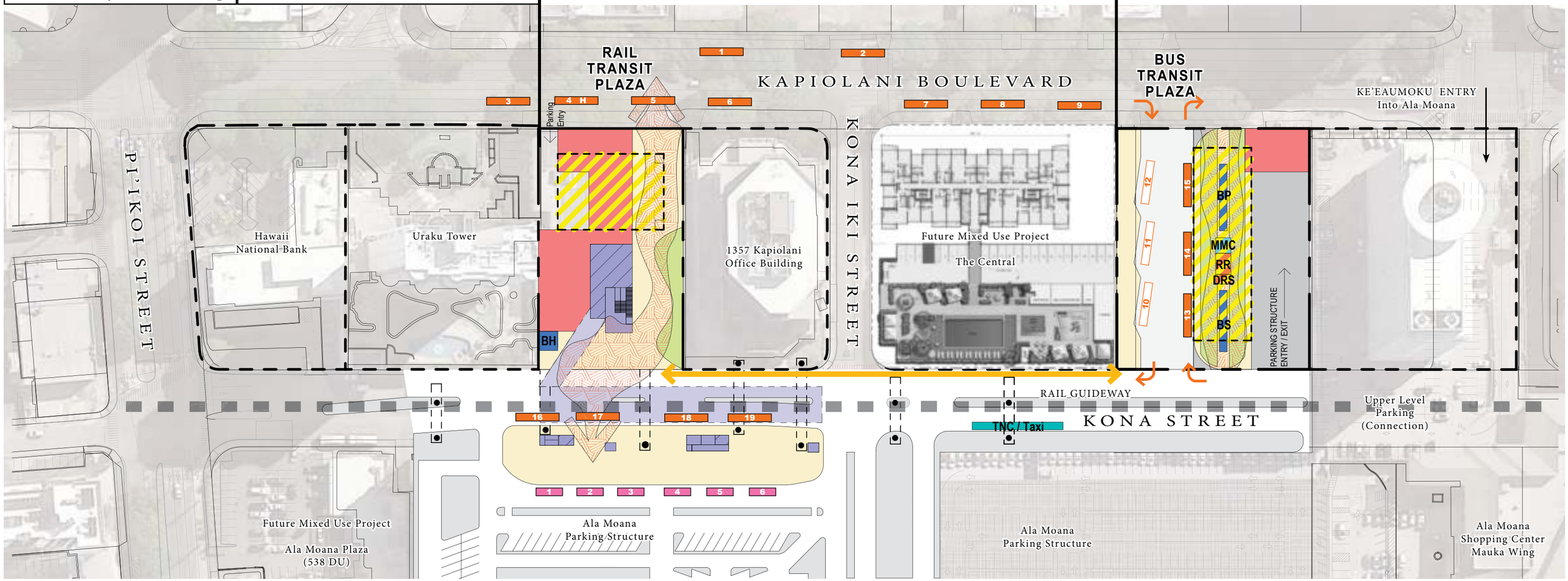
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Kapiolani-Kona Plaza / Mixed Use

- Station touch down location per 2017 plan
- Mixed-use development on Kapiolani Boulevard edge
  - 8,000sf floorplate tower; limited parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 9 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#4)
- 4 bus stops on Kona Street
- Bus staging on City owned properties at Pensacola/Waimanu Street

Parcel 2/3
Bus Hub /Affordable Housing Tower

- Bus transit plaza with affordable housing tower
  - 12,000sf tower floorplate
  - Retail along Ala Moana Boulevard
- Mid-block transit plaza connecting Kapiolani Boulevard/Kona Street
  - Bike racks and bike share
  - Micro mobility corral
  - Bus driver rest station
- 6 bus stops with electric charging equipment at 3 stops
- Residential tower above limited parking on ground floor
  - Parking structure for residents



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 3

Tier 1 Alternatives Diagrams
03/10/2021

2

MOBILITY HUB ON PARCELS 2/3 WITHOUT KONA STREET ACCESS

Legend

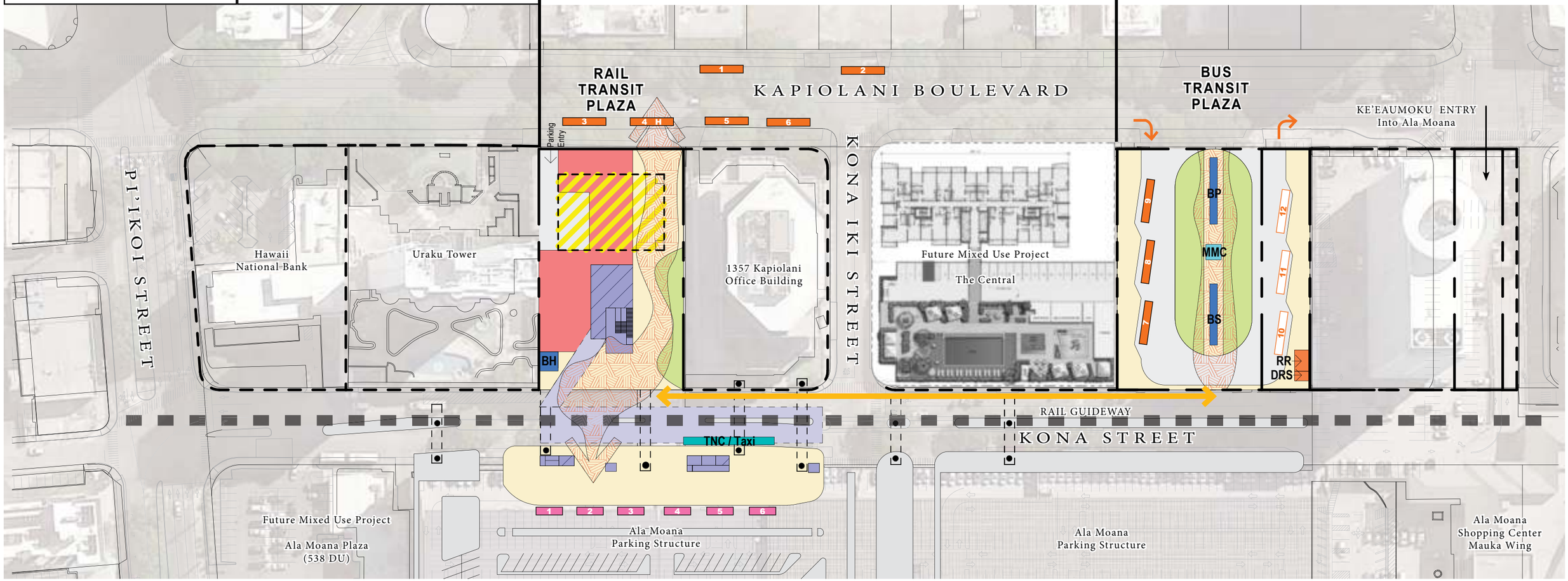
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Kapiolani-Kona Plaza / Mixed Use

- Station touch down location per 2017 plan
- Mixed use development on Kapiolani Boulevard edge
  - 8,000sf floorplate tower; limited parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 6 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#4)
- TNC/Taxi station on Kona Street

Parcel 2/3
Bus Hub; No Kona Street Access

- Bus transit plaza with access only from Kapiolani Boulevard
- Mid-block transit plaza connecting Kapiolani Boulevard/Kona Street
  - Bike racks and bike share
  - Micro mobility corral
  - Bus driver rest station
  - Potential to create retail kiosks
- 6 bus stops; access only from Kapiolani Boulevard
- Parcel 3: 3 bus stops with electric charging equipment which could func-tion as interim option for phasing
- No mixed-use development



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 4

Tier 1 Alternatives Diagrams
03/10/2021

3

INTEGRATED MOBILITY HUB (RAIL AND BUS) ON PARCEL 1

Legend

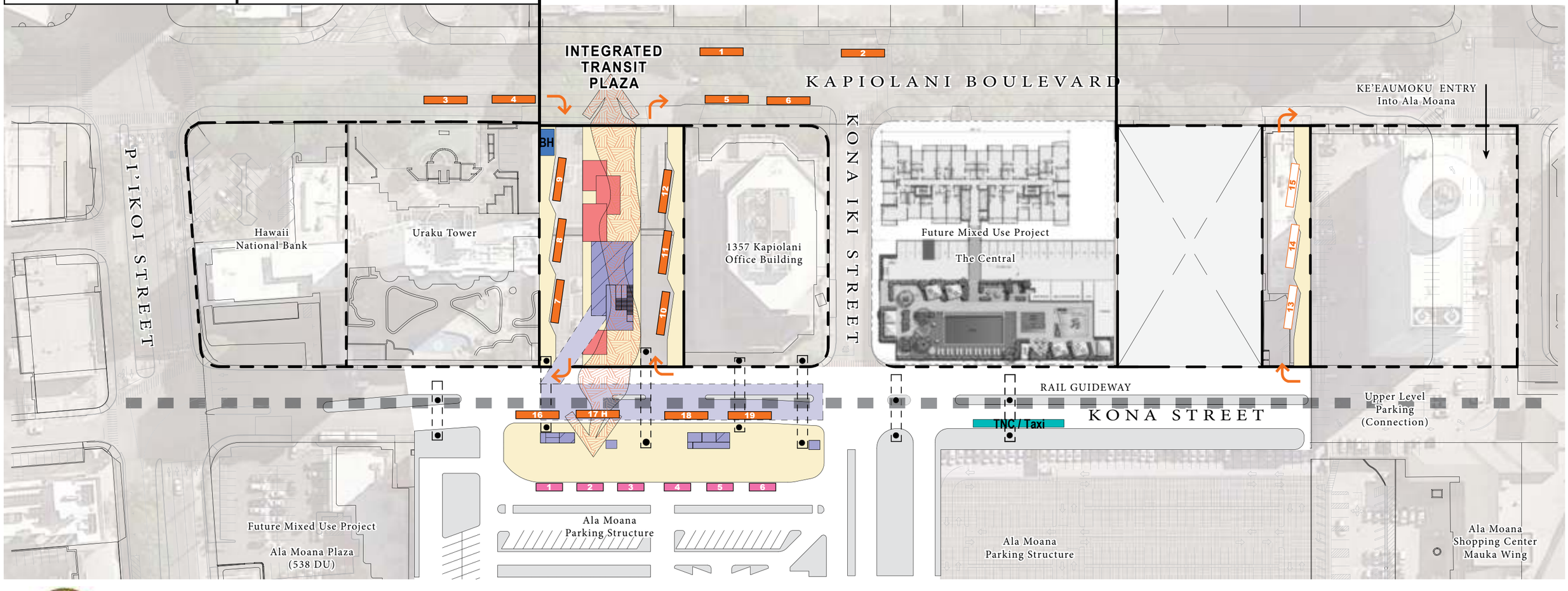
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
Integrated Rail and Bus Plaza

- Station touch down location per 2017 plan
- Mid-block plaza lined with retail from Kapiolani Boulevard to Kona Street
- Integrated transit station with 6 bus stops
- Private bus hub within Ala Moana Parking Structure
- 6 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#5)
- 4 bus stops on Kona Street
- No residential development

Parcel 2/3
No Acquisition of Parcel 2; Layover Bus Stop

- 3 layover bus stops with electric charging equipment
- Driver rest station
- No mixed-use development
- Flexible design preserves development opportunity for Parcel 2 if acquired



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 5
Tier 1 Alternatives Diagrams
03/10/2021

4A

KAPIOLANI BOULEVARD TRANSIT MALL

Legend

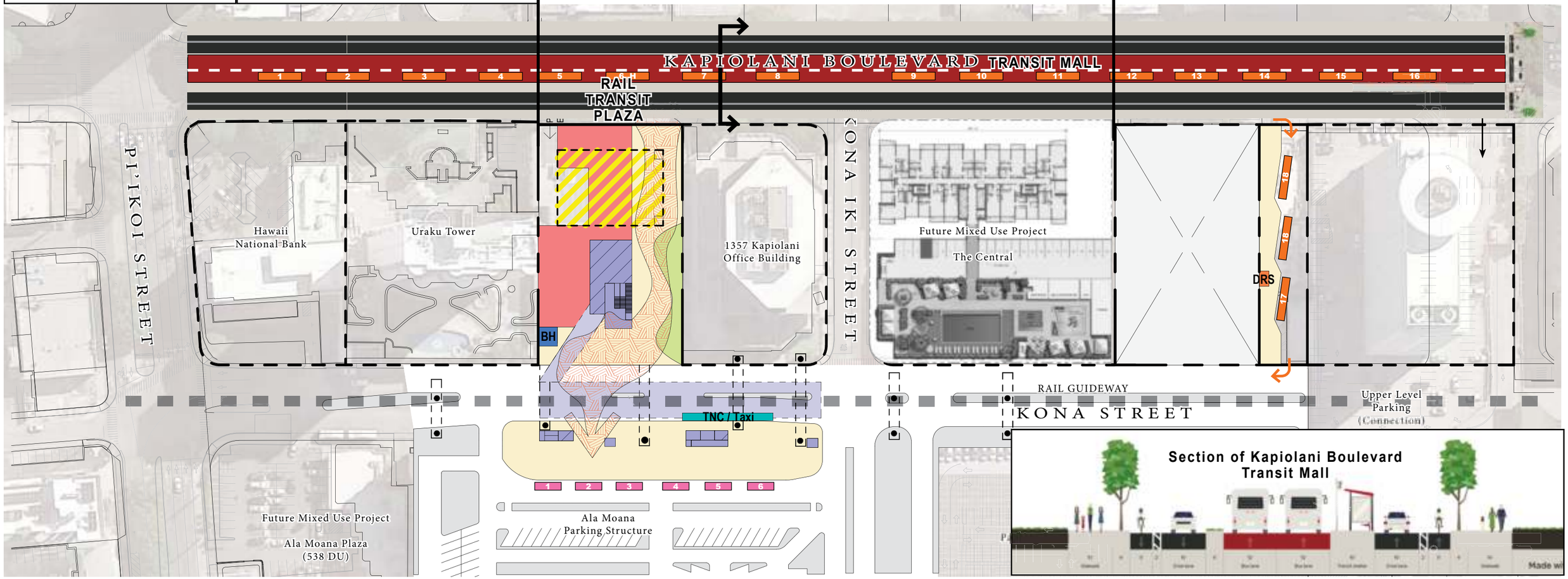
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Kapiolani-Kona Plaza / Mixed Use

- Station touch down location per 2017 plan
- Mixed use development on Kapiolani Boulevard edge
  - 8,000sf floorplate tower; limited parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 16 bus stops and dedicated bus lanes on Kapiolani Boulevard with reduced travel lanes for local traffic only
  - Handivan stop fronting Parcel 1 (#6)
- TNC/Taxi station on Kona Street

Parcel 2/3
No Acquisition of Parcel 2; Layover Bus Stop

- 3 layover bus stops with electric charging equipment
- Driver rest station
- No mixed-use development
- Flexible design preserves development opportunity for Parcel 2 if acquired



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 6

Tier 1 Alternatives Diagrams
03/10/2021

4B

DEDICATED BUS LANES ON KAPIOLANI BLVD. AND KONA STREET

Legend

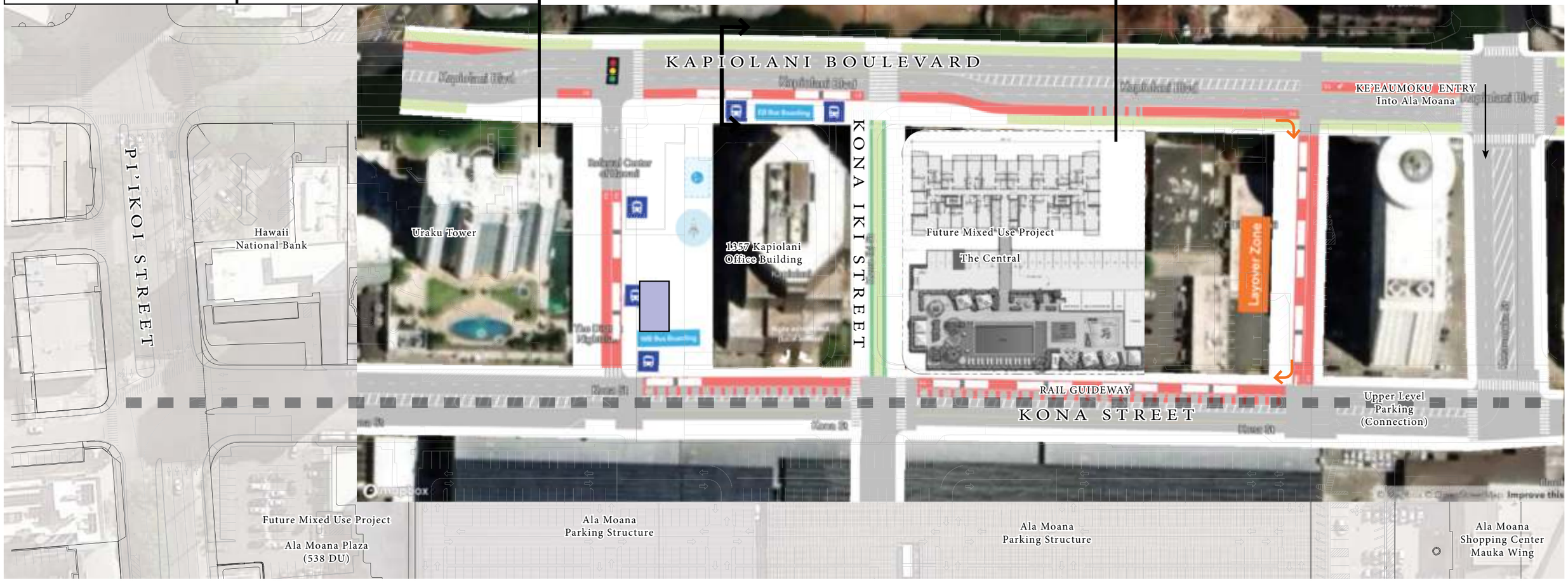
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Modified Kapiolani Boulevard & Kona Street

- Station touch down location per 2017 plan
- Potential mixed use development on Kapiolani Boulevard edge
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Bus pass thru on Parcel 1 with space for bus stops
- Modified Kapiolani Boulevard, Kona Street and Kona Iki Street
  - Dedicated bus lanes on Kapiolani Boulevard and Kona Street with clockwise bus circulation and bus stops
  - Kona Iki Street as pedestrian plaza connecting Kapiolani Boulevard and Kona Street

Parcel 2/3
No Acquisition of Parcel 2; Layover Bus Stop

- 3 layover bus stops with electric charging equipment
- Driver rest station
- No mixed-use development
- Flexible design preserves development opportunity for Parcel 2 if acquired



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 7
Tier 1 Alternatives Diagrams
03/10/2021

5A

KONA STREET TRANSIT MALL

Legend

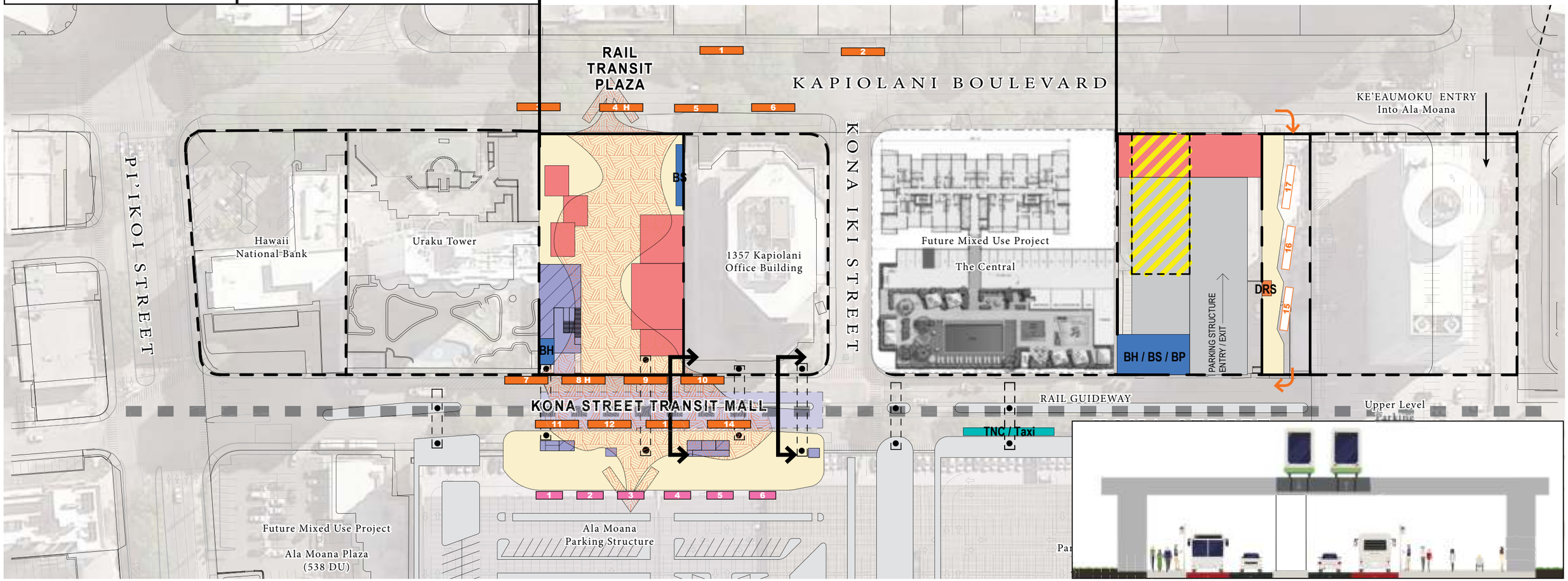
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
Grand Kapiolani-Kona Plaza

- Shifted rail station location
- Full parcel plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- 6 bus stops on Kapiolani Boulevard
- Dedicated bus lanes on Kona Street with reduced travel lanes for local traffic
  - 8 bus stops, Handivan (#8)
- Private bus hub within Ala Moana Parking Structure
- TNC/Taxi station on Kona Street

Parcel 2/3
Mixed-Use Development Parcel 2/ Layover 3

- Mixed-Use Development on Parcel 2
  - Residential Tower with 12,000sf fl oorplate
  - Parking Podium
- Bike Hub / Bike Share / Bike Parking integrated into mixed-use development on Parcel 2
- Bus layover for 3 buses on Parcel 3 with electric charging equipment
  - Driver rest station



Section of Kona Street Transit Mall

KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 8
Tier 1 Alternatives Diagrams
03/10/2021

5B

KAPIOLANI BLVD. AND KONA STREET WITH BUS STOPS

Legend

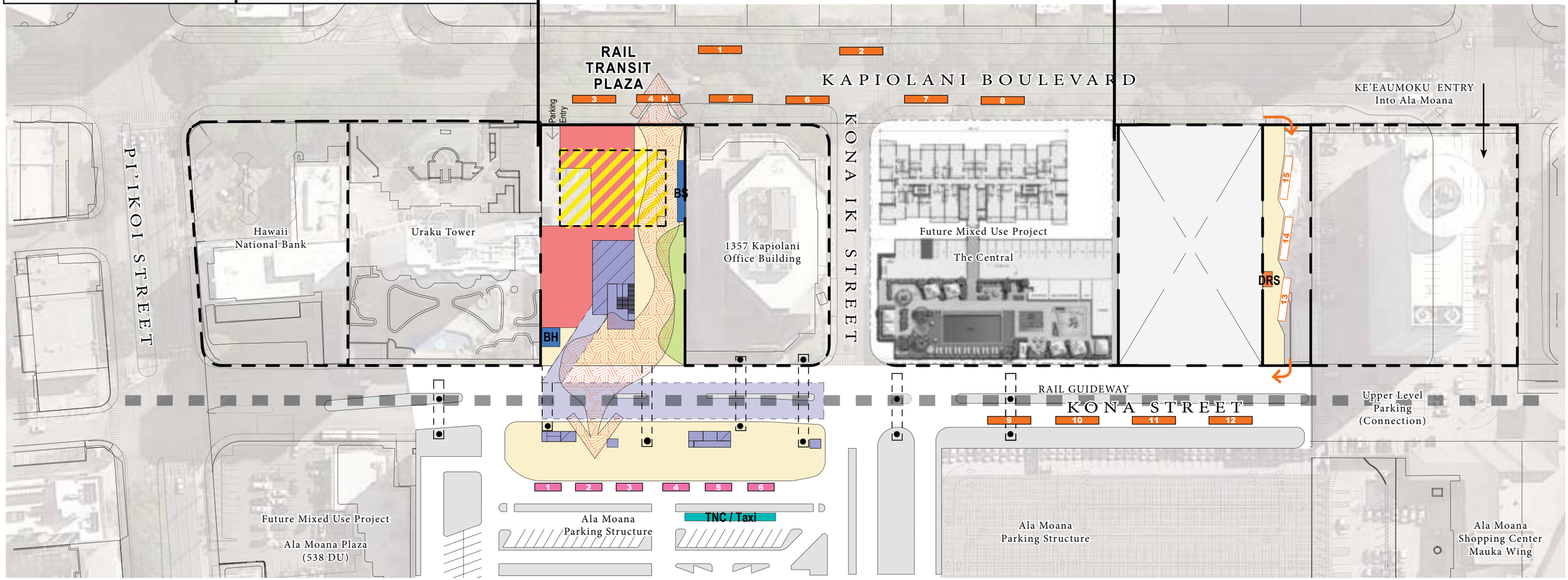
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
2017 Rail Station Concept / Kapiolani-Kona Plaza / Mixed-Use

- Station location per 2017 plan
- Mixed-use development on Kapiolani Boulevard edge
  - 8,000sf floorplate tower; limited parking
- Plaza connection lined with retail from Kapiolani Boulevard to Kona Street
- Private bus hub within Ala Moana Parking Structure
- 12 bus stops on Kapiolani Boulevard and Kona Street
  - Handivan stop fronting Parcel 1 (#4)
- TNC/Taxi station in Ala Moana Parking Structure

Parcel 2/3
No Acquisition of Parcel 2; Layover Bus Stop

- 3 layover bus stops with electric charging stations
  - Driver rest station
- No mixed-use development
- Flexible design preserves development opportunity if Parcel 2 is acquired



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

0' 50' 100' 200' 300'

FIGURE 9
Tier 1 Alternatives Diagrams
03/10/2021

6

BUS TRANSIT HUB IN AMC MALL PARKING STRUCTURE

Legend

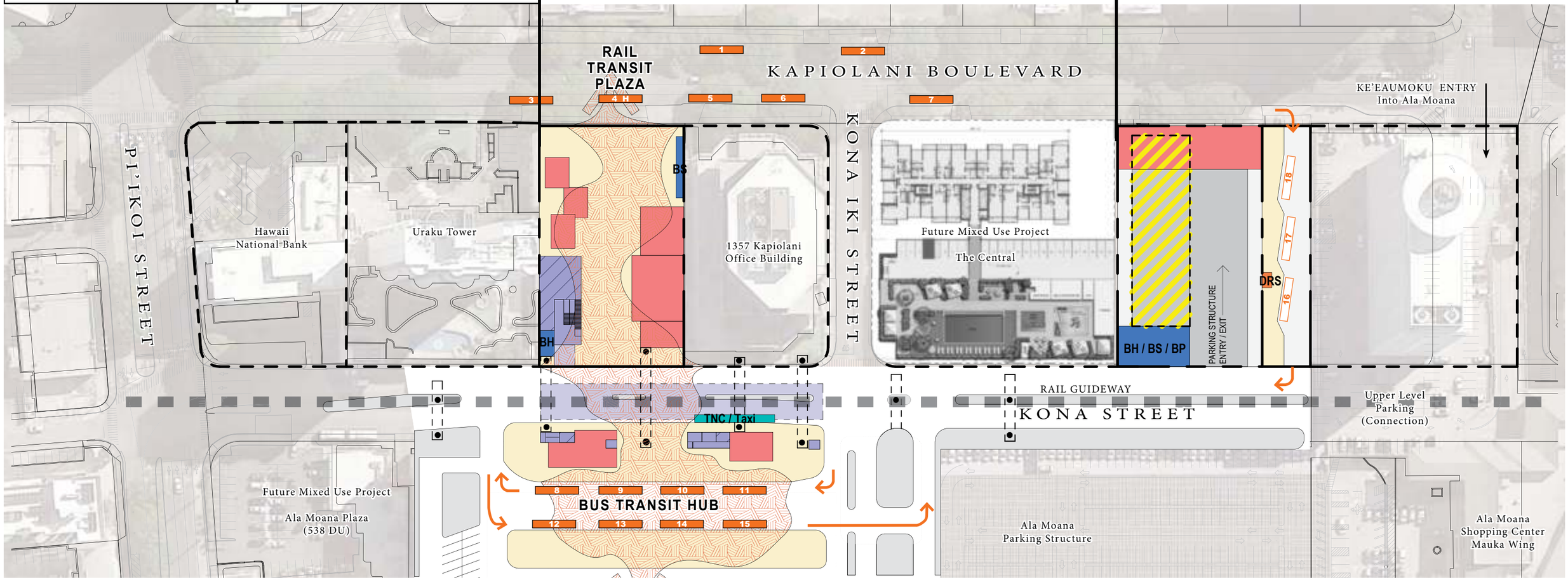
- BH BP BS — Bike Hub (BH) / Bike Parking (BP)/ Bike Share (BS)
- TNC / Taxi Stand
- Micro-Mobility Corral
- 3 — Private buses (40-ft)
- 3 — Public bus stop (40 to 60-ft)
- 3 — Public bus layover w/ charging (40-60-ft)
- HART Station Ground/Station Level
- Residential Tower Above
- Retail
- Improved pedestrian connections
- Primary pedestrian plaza connections

Parcel 1
Grand Kapiolani-Kona Plaza

- Shifted rail station location
- Full parcel plaza connection lined with retail from Kapiolani Boulevard to Kona Street
  - Similar concept to TOD Plan
- 7 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#4)
- 8 bus stops on street level of Ala Moana Center Mall Parking Structure
- Requires private buses to remain on other side of mall or find other location
- Bus driver rest station
- Retail integrated with the Bus Transit Hub in the Ala Moana Center Mall Parking Structure
- TNC/Taxi station on Kona Street

Parcel 2/3
Mixed Use Development Parcel 2/ Layover 3

- Mixed-Use Development on Parcel 2
  - Residential Tower with 12,000sf floorplate
  - Parking Podium
- Bus layover for 3 buses on Parcel 3 with electric charging equipment
  - Driver rest station
- Bike Hub / Bike Share / Bike Parking integrated into mixed-use development on Parcel 2



KALIA PLAZA MOBILITY HUB

Scale: 1"=100'

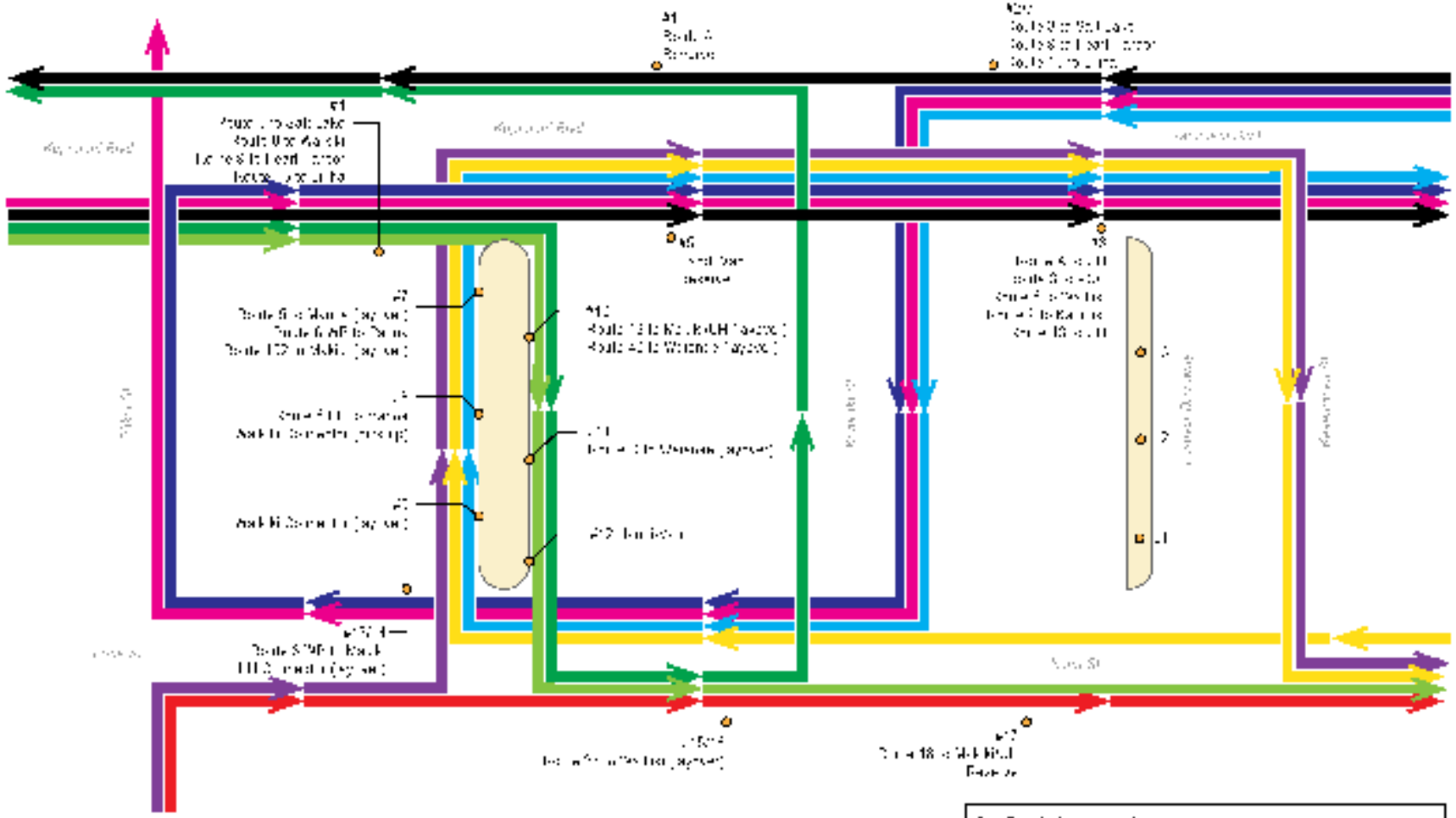
0' 50' 100' 200' 300'

FIGURE 10
Tier 1 Alternatives Diagrams
03/10/2021

APPENDIX D

Bus Circulation Diagram for Locally Preferred Alternative

Bus Circulation Diagram for Locally Preferred Alternative



Bus Circulation Diagram - Rail to AMC Scenario

APPENDIX E

Rough Order of Magnitude Cost Detail for LPA Options

KALIA PLAZA MOBILITY HUB

LOCALLY PREFERRED ALTERNATIVE OPTIONS

Rough Order of Magnitude Cost Detail

Date: 10/12/2022

Item	OPTION A1		OPTION A2		Unit	Unit Cost
	Quantity	Cost	Quantity	Cost		
Demolition						
Existing Building & Site Demolition	1	$2,430,000	1	$2,430,000		
Demolish Exist. Building (parcel 1) 3 and 4 story	*81,800*	*$2,045,000*	*81,800*	*$2,045,000*	*SF*	*$25.00*
Demolish Exist. Building (Parcel 3) 2 story	*15,400*	*$385,000*	*15,400*	*$385,000*	*SF*	*$25.00*
Clear and Grub Site Preparation	54,600	$109,200	54,600	$109,200	SF	$2.00
Demolition		**2,539,000**		**2,539,000**		
Transit Plaza Improvements						
Bus Platform	1	$2,109,500	1	$2,174,000	LS	
Platform Area	*19,200*	*$576,000*	*21,350*	*$640,500*	*SF*	*$30.00*
Concrete						*$22.22*
Base						*$1.85*
Subgrade prep						*$2.00*
Bus Shelters	*17*	*$680,000*	*17*	*$680,000*	*EA*	*$40,000*
Trash Cans	*17*	*$8,500*	*17*	*$8,500*	*EA*	*$500*
Benches	*34*	*$119,000*	*34*	*$119,000*	*EA*	*$3,500*
Signs	*34*	*$51,000*	*34*	*$51,000*	*EA*	*$1,500*
Lighting	*45*	*$675,000*	*45*	*$675,000*	*EA*	*$15,000*
Landscape and Irrigation	3,106	$93,180	1,553	$46,590	SF	$30.00
Building Pad Preparation	8,950	$223,750	9,300	$232,500	SF	$25.00
Cameras and Security	1	$500,000	1	$500,000	LS	$500,000
Bicycle Storage Racks	150	$52,500	150	$52,500	EA	$350
Bicycle Storage Enclosure	2,000	$200,000	2,000	$200,000	SF	$100
EV Charing Stations	3	$4,500,000	3	$4,500,000	EA	$1,500,000
Driver Comfort Station	1	$200,000	1	$200,000	EA	$200,000
Utility Extensions	1	$100,000	1	$100,000	LS	$100,000
Stormwater Treatment	3,413	$51,188	3,413	$51,188	CF	$15.00
Transit Plaza Improvements		**8,030,000**		**8,057,000**		
Street Improvements						
Striping Construction	1	$100,000	1	$100,000	Allow	$100,000
Traffic Signal Modification (Pi'ikoi / Kapiolani)	1	$150,000	1	$150,000		$150,000
Traffic Signal Modification (Kapiolani / Kona Ikl)	1	$300,000	1	$300,000		$300,000
Traffic Signal Modification (Pi'ikoi / Kona)	1	$300,000	1	$300,000		$300,000
Concrete Pavement (including bus stop)	31,180	$1,870,800	28,980	$1,738,800	SF	$60.00
Concrete						*$44.44*
Base						*$3.70*
Subbase						*$1.85*
Subgrade prep						*$2.00*
Asphalt Pavement	25,200	$412,650	25,200	$412,650	SF	$16.38
Asphalt						*$9.38*
Base						*$3.33*
Subbase						*$1.67*
Subgrade prep						*$2.00*
Raised Crosswalk on Kona St.	1	$50,000	1	$50,000	LS	$50,000
Pedestrian Improvements at Intersections	7	$350,000	7	$350,000	EA	$50,000
Street Improvements		**3,533,000**		**3,401,000**		
Construction Subtotal		**14,102,000**		**13,997,000**		
Mobilization, Temp Controls (erosion, traffic, peds) (13%)	1	$1,833,000	1	$1,820,000	LS	
GC Subtotal		**1,833,000**		**1,820,000**		
Construction Total		**$15,935,000**		**$15,817,000**		
Professional Services						
Environmental Clearance		$750,000		$750,000		
Preliminary Engineering		$956,000		$949,000	6%	
Final Design		$1,594,000		$1,582,000	10%	
Construction Administration		$956,000		$949,000	6%	
Construction Management		$2,390,000		$2,373,000	15%	
Professional Services Total		**6,646,000**		**6,603,000**		
Project Cost Subtotal		**$22,581,000**		**$22,420,000**		
Contingency		11,290,500		11,210,000	50%	
Total Project Cost		**$33,871,500**		**$33,630,000**		

Assumptions:

Environmental mitigation, if required, is excluded.
Platforms and furnishings will be standard finishes. High end architectural finishes may increase costs.
Present day dollars, no escalation.
Land acquisition costs are not included.
Public restrooms are included in the contingency at this time.

APPENDIX F

Public Meeting Presentation

Kalia Mobility Plaza Transit Hub at Ala Moana Alternatives Analysis (AA)

Community Meeting

April 29, 2021

Honolulu COMPLETE STREETS

COMMUNITY MEETING AGENDA

- Roger Morton, DTS Director
- Introductions
- Project Description
- Current Conditions
- Mobility Plaza Programming
- Alternatives Analysis Methodology & Evaluation Criteria
- Mobility Plaza Alternatives
- Breakout Groups
- Next Steps

Project Team

Project Sponsor	City & County of Honolulu Department of Transportation Services
Partner Agency	Oahu Metropolitan Planning Organization
Consultant Team	Kimley-Horn & Associates, Inc.
	G70
	Weslin Consulting Services, Inc.

Tell Us About You – 4 Polls

- Do you live/work/shop/play (such as eating at restaurants) in the area?
- Do you regularly use the following modes?
- How often to you ride on average?
- Have you ridden TheBus or TheHandi-Van to Ala Moana?

POLL: How do you use the Ala Moana area? **Pick all that apply.**

- ❑ Live in area
- ❑ Work in area
- ❑ Shop
- ❑ Play (restaurants, events)
- ❑ Conduct business (banking, post office)
- ❑ None of the above

POLL: Do you regularly use the following modes? **Pick all that apply.**

- ❑ TheBus
- ❑ TheHandi-Van
- ❑ Walking
- ❑ Bicycling
- ❑ Biki Bike
- ❑ TNC's (i.e., Uber/Lyft)
- ❑ Personal Vehicle Use

POLL: On average, how often do you ride transit? **Pick one.**

- ❑ Several days a week
- ❑ On a weekly basis
- ❑ On a monthly basis
- ❑ Now and then
- ❑ Do not ride

POLL: Have you ridden TheBus or TheHandi-Van to Ala Moana? **Pick one.**

- Yes
- No

Project Description

Kalia Mobility Plaza Vision

Goal: Develop new multimodal hub in vicinity of Ala Moana Rail Transit Station

- Interim bus facility during construction of rail and private projects to maintain operations
- Long-term use as new multimodal transit center with unique sense of place
- Passenger connectivity and linkage between rail and bus systems and other modes
- Evaluate opportunities for mixed-use as part of an integrated joint development to leverage opportunity created by transit investment

DPP TOD Plan

Purpose and Need

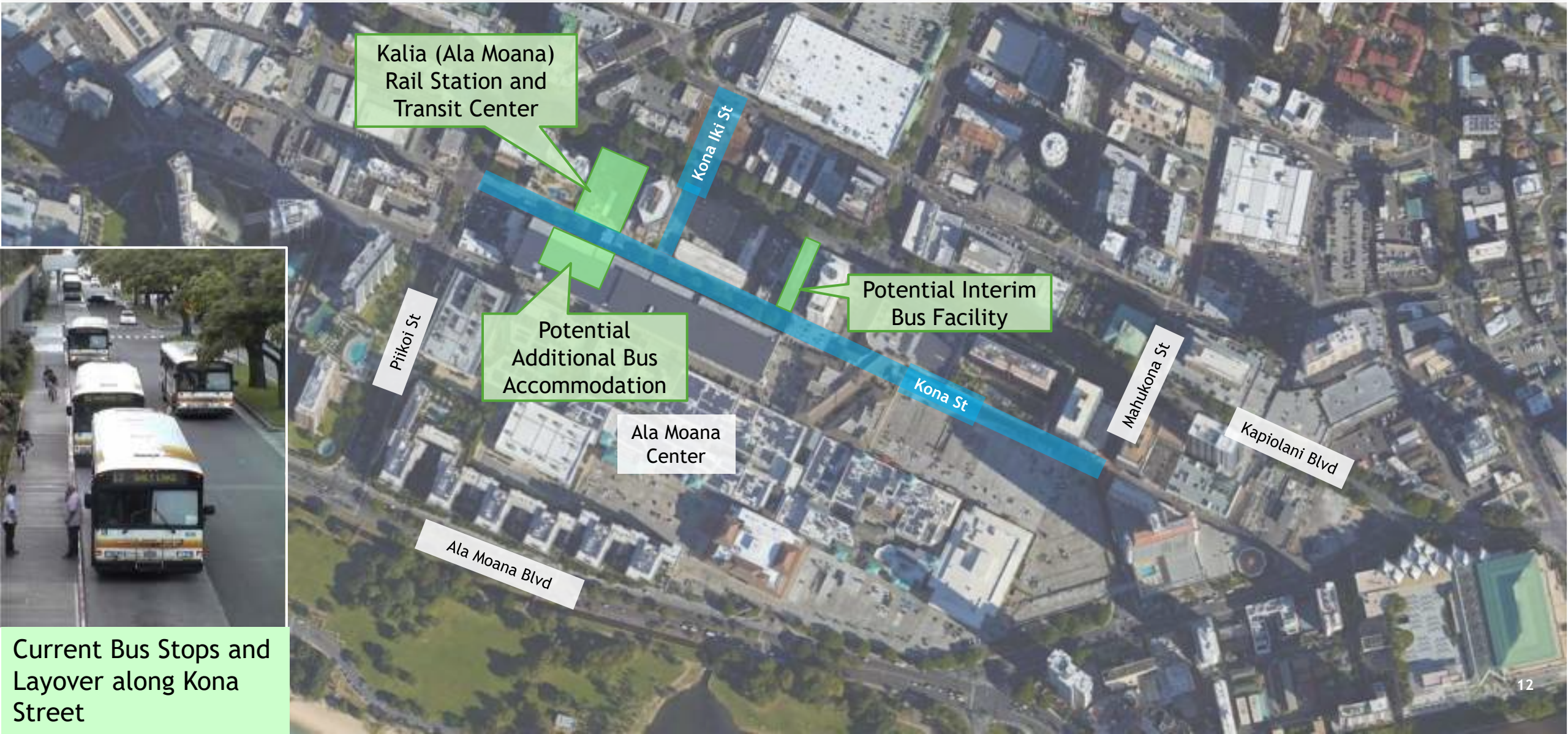
Purpose

- Provide efficient connections between the Honolulu Rail Transit's AMC Station and Honolulu's bus system
- Promote safe access to the public transit system for pedestrians, cyclists, and other modes
- Provide convenient pedestrian connections to the surrounding area
- Provide a transit facility that accessible to individuals with disabilities and transit dependent populations
- Provide a secure, safe, and inviting space for transit patrons

Need

- Improve connectivity between rail and bus systems
- Improve accessibility to public transportation system
- Improve circulation for all modes
- Improve bus operations
- Improve safety
- Improve transportation equity
- Support economic development

Project Location Map



Current Bus Stops and Layover along Kona Street

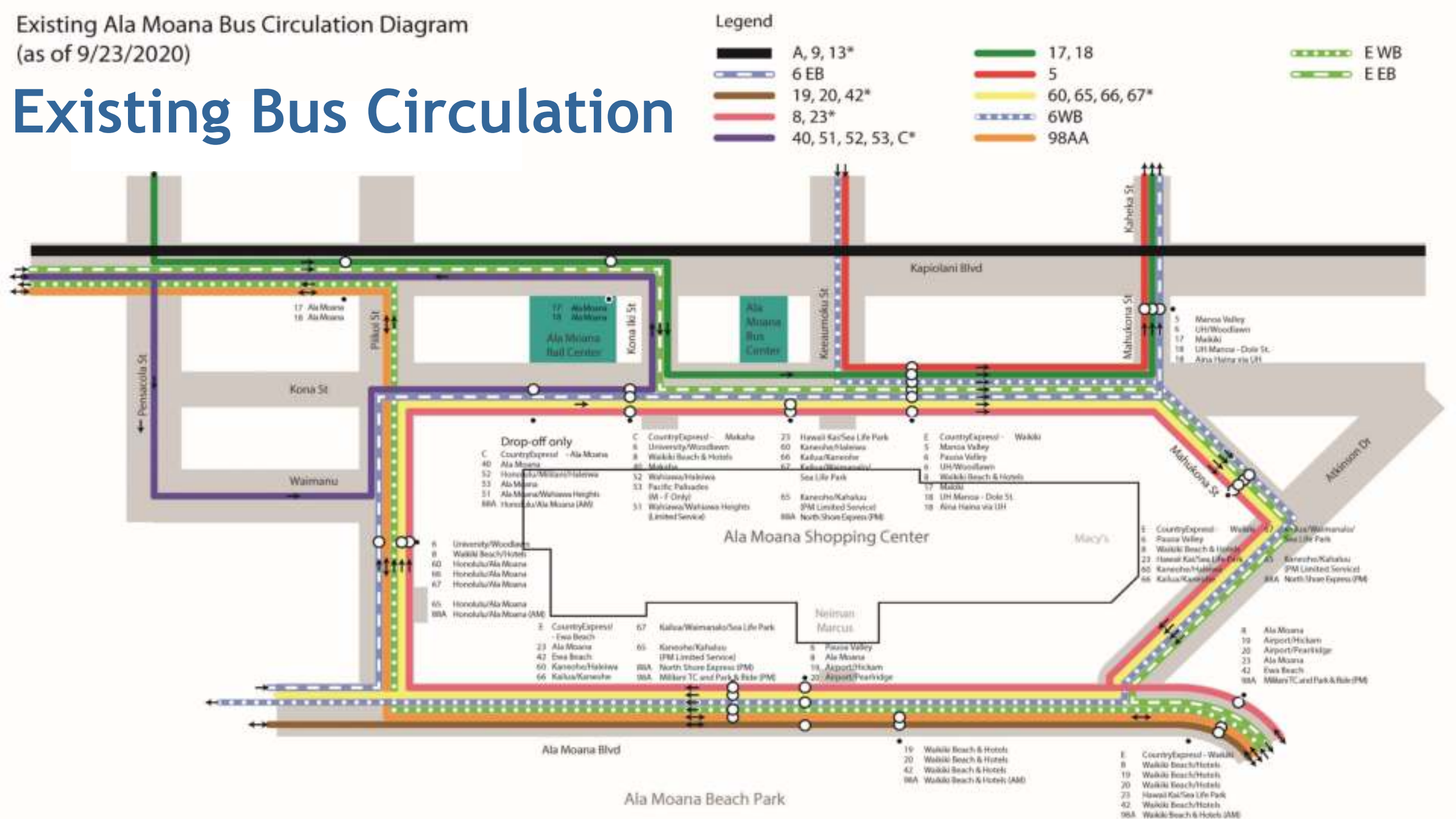
Current Conditions

Multi-modal Transportation Analysis
Existing Conditions (pre-covid)

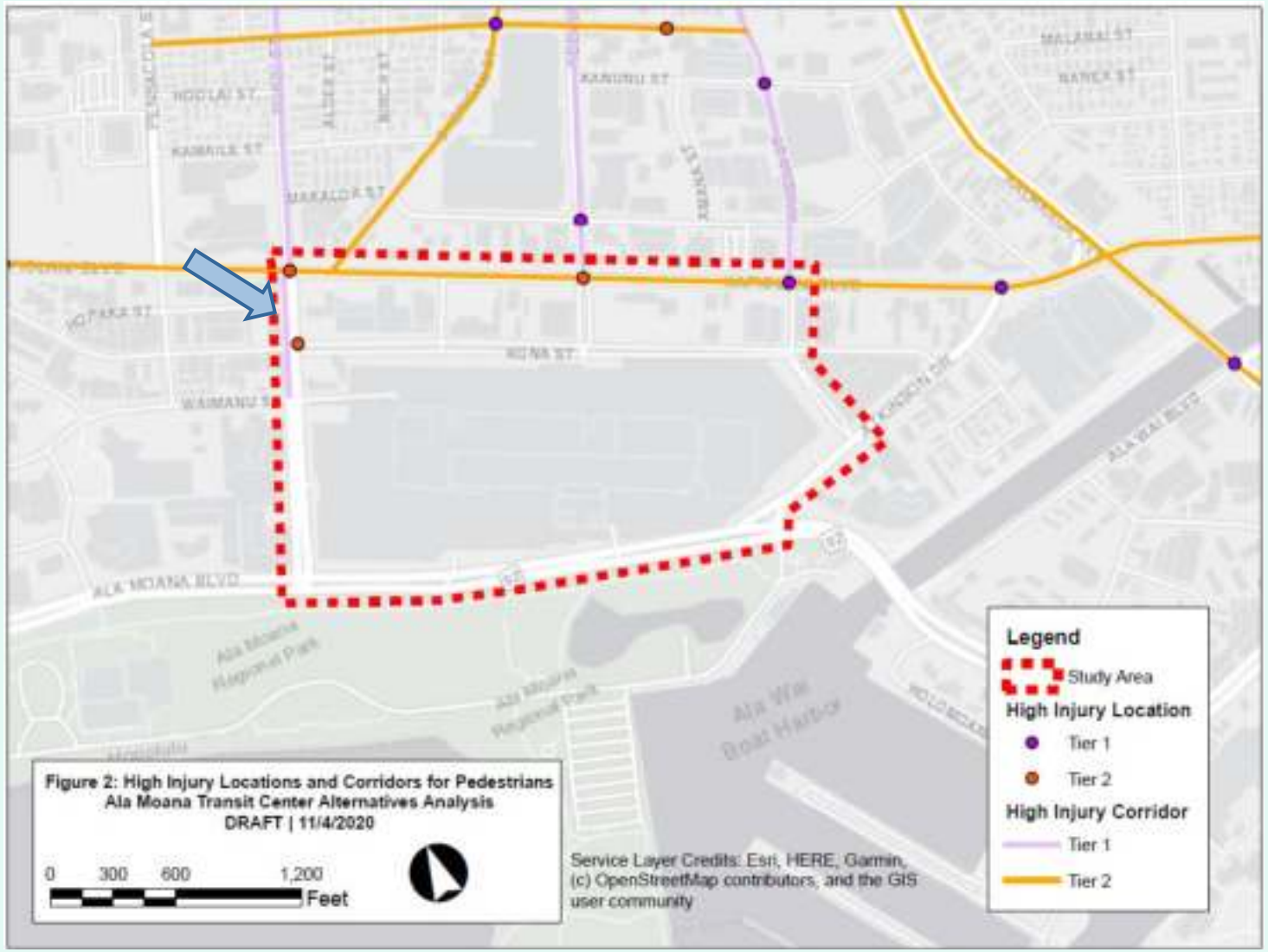
- Transit Existing Bus Circulation
- Pedestrian Conditions Analysis
  - High Injury Locations and Corridors for Pedestrians
  - Pedestrian Comfort Level
- Bicycle Conditions Analysis
  - Existing and Proposed Facilities
  - Bicycle Level of Stress Analysis

Existing Ala Moana Bus Circulation Diagram
(as of 9/23/2020)

Existing Bus Circulation

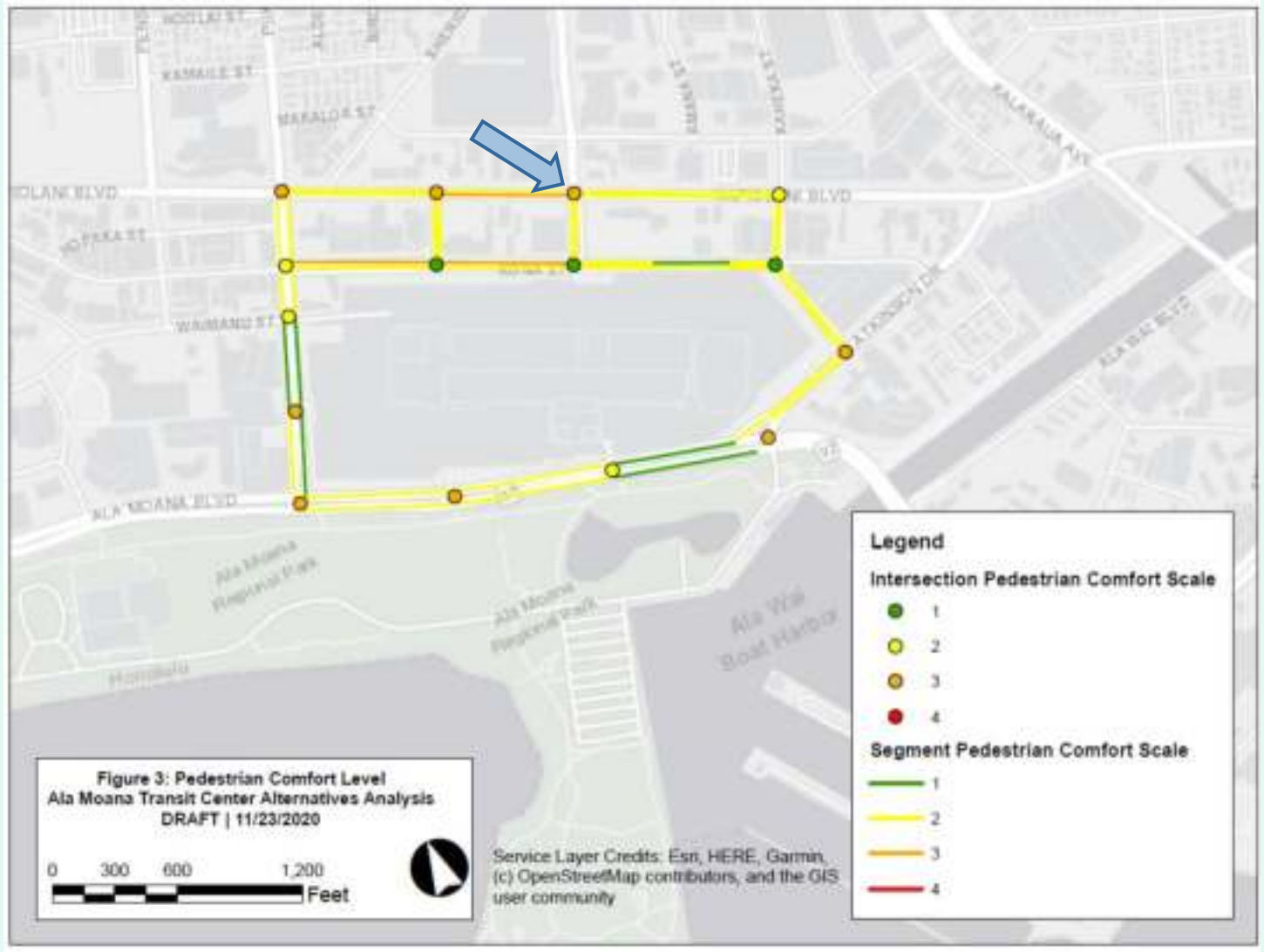


High Injury Locations and Corridors for Pedestrians



Piikoi Street – Tier 1 area

Pedestrian Comfort Level

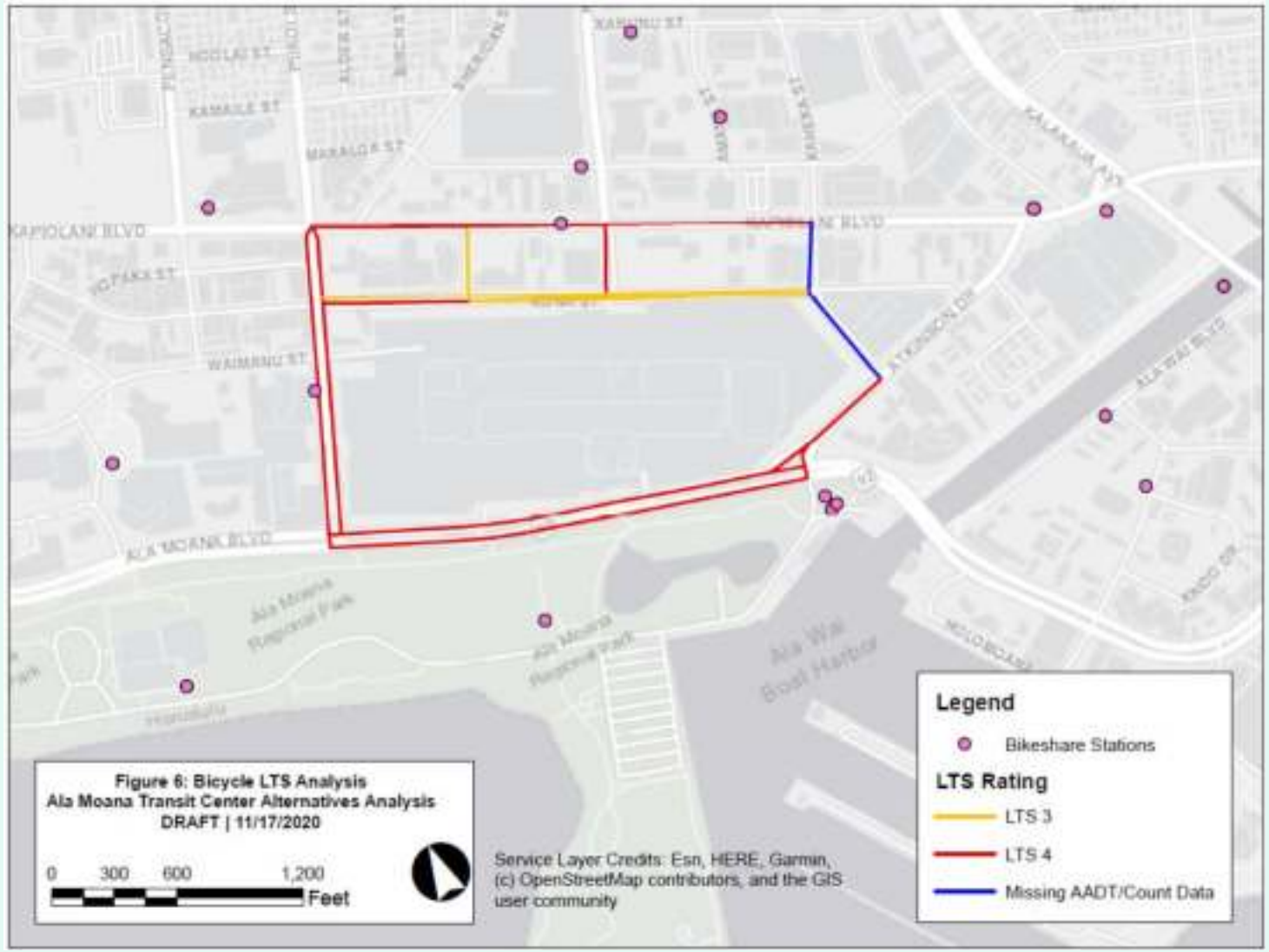


Kapiolani Blvd & Keeaumoku St
Comfort Level 3

Existing & Proposed Bicycle Facilities

Mahukona St between Kapiolani Boulevard and Kona Street

Bicycle Level of Traffic Stress

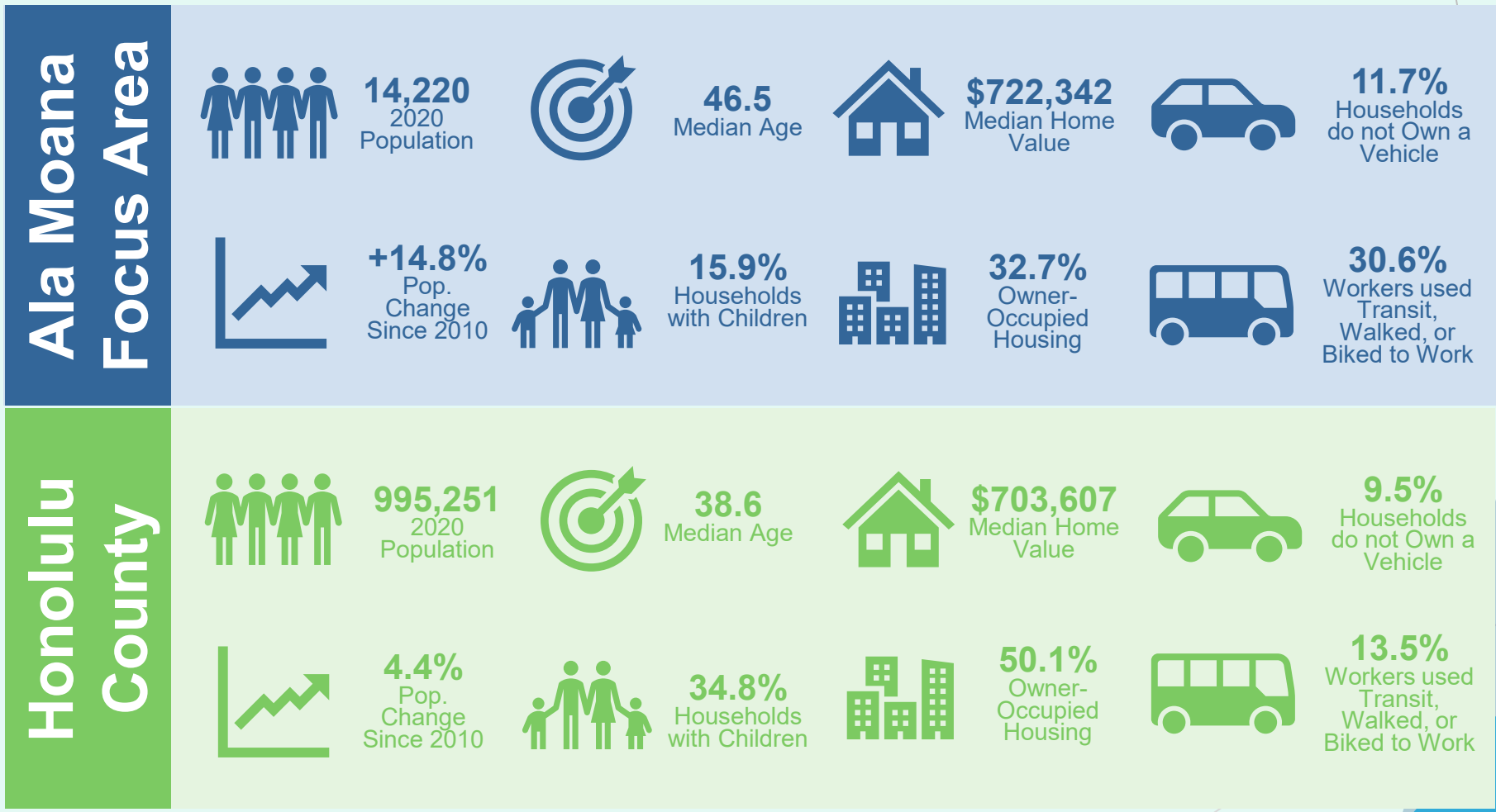


Lack of bicycle facilities in study area results in high levels of traffic stress for bicyclists

POLL: Which aspect of the current conditions do you believe is most important to improve? **Pick all that apply.**

- ❑ Improve transfers and waiting areas
- ❑ Improve sidewalks and street crossings for pedestrians
- ❑ Add bike lanes/paths for cyclists
- ❑ Reduce traffic congestion

Demographic Snapshot



Source: ESRI Business Analyst Online, U.S. Census, Kimley-Horn

Mobility Plaza Programming

Mobility Plaza Programming - Modes

- Fixed route bus (TheBus) - 23 existing routes
- Paratransit (TheHandi-Van)
- Private bus/trolley (e.g., Waikiki Trolley)
- Bikes
- Micromobility
- Taxis/TNCs

New 40-Foot Battery-Electric Bus
Source: Mass Transit Magazine

TheHandi-Van Cutaway Van
Source: Honolulu Civil Beat

Biki Stop
Source: gobiki.org

POLL: Due to space constraints, it may not be possible to fully accommodate all transportation modes at the Kalia Mobility Plaza. What should be prioritized? **Pick your top 5**.

- Fixed route transit buses (TheBus)
- Paratransit Buses (TheHandi-Van)
- Private buses/trolleys (e.g., Waikiki Trolley)
- Bike Parking/Storage
- Bike Share
- Micromobility (i.e., electric bikes, electric scooters)
- Taxis
- Car-share
- Vehicle Parking
- Drop-offs/pick-ups (kiss-and-ride)

Mobility Plaza Programming
Passenger Facilities

- Waiting areas – shelters/benches
- Fare vending
- Wayfinding – real-time information
- Restrooms
- Vendors/transit-oriented retail
- Public space and art

Passenger Shelter
Source: Future Systems Inc.

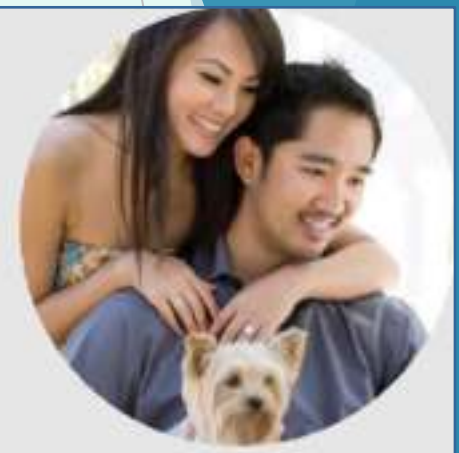
Touchless Digital Kiosk
at Dallas DART Station
Source: Smart Cities World

Mobility Plaza Programming
Joint Development

- Housing
  - Affordable residential
  - Work force
  - Senior
- Transit supportive retail

OLD AND NEWCOMERS

This segment is typically composed of renters who are just beginning their careers or retiring. Some are still in college; some are taking adult education classes. Most are single, along with some married couples who do not have children. This segment ranks in the bottom third of budget and wealth indexes.



DEFINING TRAITS:

- Metropolitan city-dwellers.
- Unemployment is lower at 5.1%, with an average labor force participation rate of 62.6%.
- Consumers are price-aware and environmentally conscious.
- 45% of housing units are single-family dwellings; 45% are multiunit buildings in older neighborhoods, built before 1980.
- Most common occupations are in Office & Administrative Support and Sales.

Typical Housing:
Single-Family Units; Multifamily Units

Median Income:
$44,900

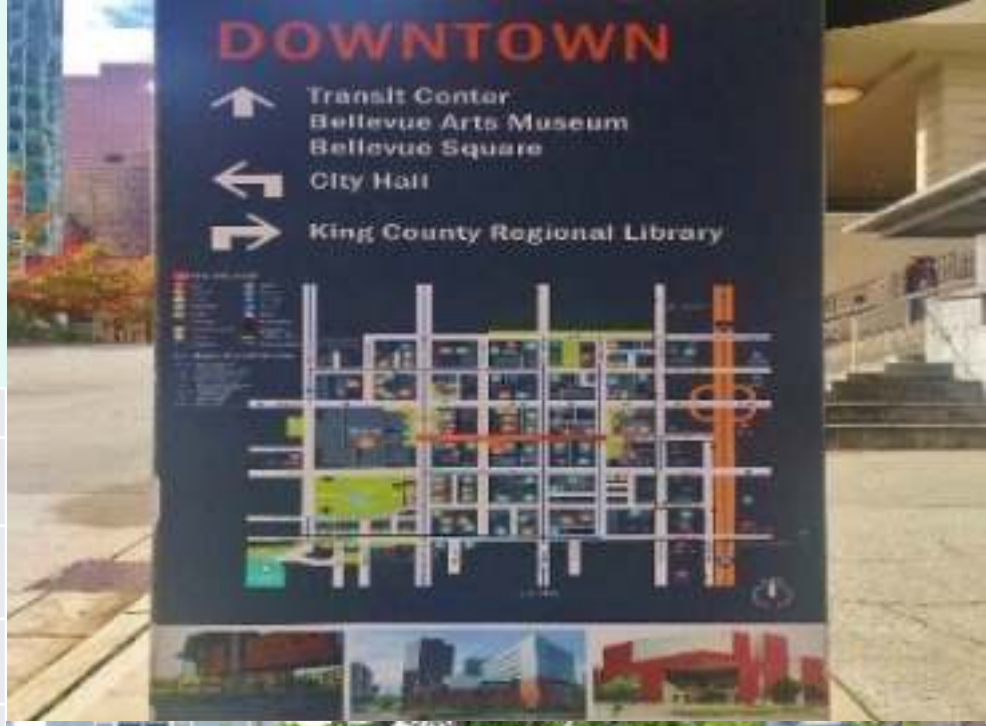
Predominant Tenure:
54.8% renter-occupied

Beyond integrating different modes of transportation and facilitating transfers, mobility hubs often serve as a focal point in the community and include multi-modal supportive infrastructure and place-making components to create active centers. What should be prioritized? **Pick top 5**

- Commuter Store
- Digital Transit Kiosk
- Bike Hub
- Public Plaza
- Electric Vehicle Charging
- Wi-Fi
- Mobile Device Charging
- Luggage Storage/Parcel Delivery Lockers
- Transit Oriented Retail
- Joint Development with Housing Options

Example Transit Center
Bellevue Transit Center – Bellevue, WA

Element		
Primary	Off-Street Bus Terminal	• 12-bays bus terminal serving 20 bus routes
	On-Street Bus Stops	• 2 on-street bus stops an additional dedicated stop for drop off
	Bicycle Infrastructure	• Bike racks
	Shared Mobility	• Seeking vendors for bikeshare
	Passenger Information	• Rider services building on-site as well as on-site supervisor
	Pedestrian Access	• Walking paths, wayfinding throughout Downtown Bellevue
Secondary	Residential Development	• None associated with transit center; residential buildings nearby
	Other Land Uses	• Business, retail, and located within a few blocks of a major shopping mall
	Park & Ride	• No parking at transit center. Public parking is available in nearby buildings.
	Rail Information	• Light rail extension to Bellevue is expected to open in 2023.
Land Use		• Urban



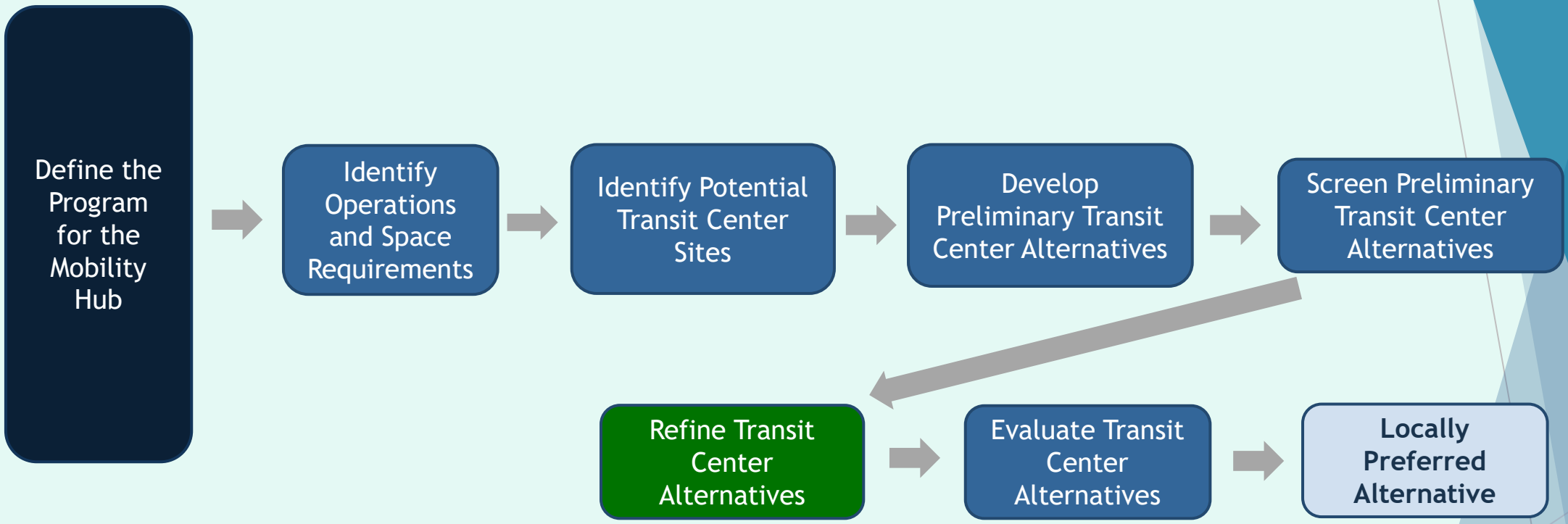
Example Transit Center
Northgate Transit Center – Seattle, WA

Element		
Primary	Off-Street Bus Terminal	• 6-bay bus terminal serving 12 routes
	On-Street Bus Stops	• 5 on-street bus stops located on adjacent streets
	Bicycle Infrastructure	• 12 bike lockers and additional bike racks • Protected bike lanes and new pedestrian/bicycle bridge crossing I-5 under construction
	Shared Mobility	• Bikeshare operated by Jump with a dockless system
	Passenger Information	• Customer information/vendor kiosk
	Pedestrian Access	• New pedestrian/bicycle bridge crossing I-5
	First/Last Mile Connection	• Adjacent to new rail station
Secondary	Placemaking	• Proposed TOD is in design
	Residential Development	• Thornton Place Urban Village with 266 apartments, 121 condos, 143-unit senior living • Adjacent to theater, restaurants, shopping
	Other Land Uses	• Near Northgate Shopping Mall
	Park & Ride	• 5 park-and-ride lots or garages (about 1,430 parking spaces)
	Rail Information	• Sound Transit Light Rail extension due to open in October 2021
Land Use		• Suburban

Alternative Analysis

- Methodology & Evaluation Criteria

Alternatives Analysis Process



Evaluation Criteria

Site Functionality

- Serves short- and long-term programmatic needs for multi-modal transit center
- Public safety (viewshed/ sightlines)

Bus Operations

- Efficiency in bus route ingress/egress

Connectivity between Transit Services

- Connectivity with Ala Moana rail station
- Transfer convenience among bus routes

Local Circulation

- Pedestrian and passenger flows and safety
- Effects on vehicle circulation

Land Requirements

- Number of parcels
- Opportunities for mixed-use joint development
- Compatibility with adjacent properties

POLL - Evaluation Criteria
Select Your Top 5 Criteria

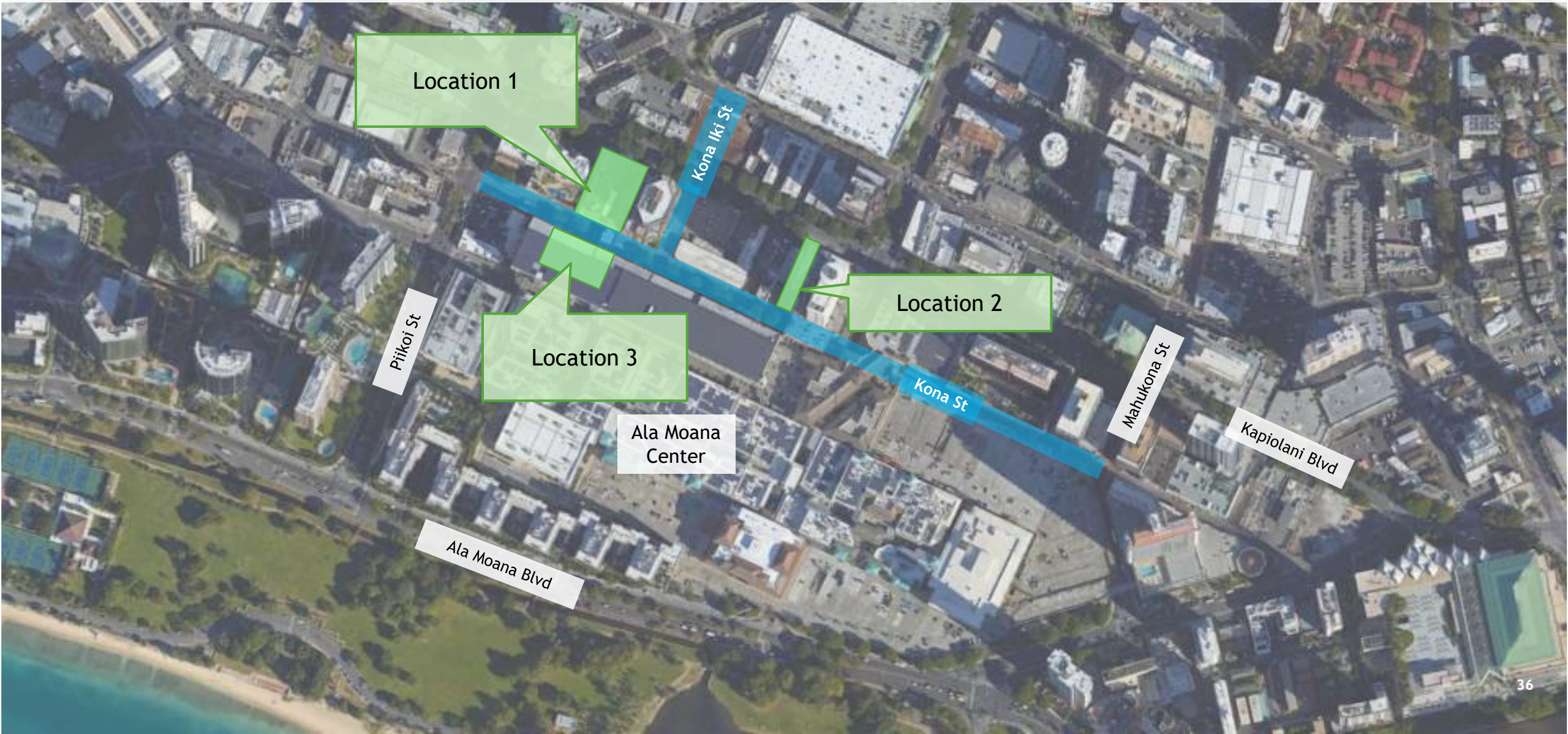
- Serves the Needs of a Multi-modal Transit Center
- Public Safety (people have clear views of area)
- Bus Route Efficiency (ease of getting to and from transit center)
- Connectivity with Future Rail Station
- Transfer Convenience Between Bus Routes
- Pedestrian and Passenger Flows and Safety
- Effects on Vehicle Circulation
- Number of Land Parcels Needed
- Opportunities for Mixed-use Joint Development
- Compatibility with Adjacent Properties

Components of the Locally Preferred Alternative

- Location(s)
- Project Definition / Program
- Conceptual Plan

Mobility Plaza Alternatives

Project Location Map



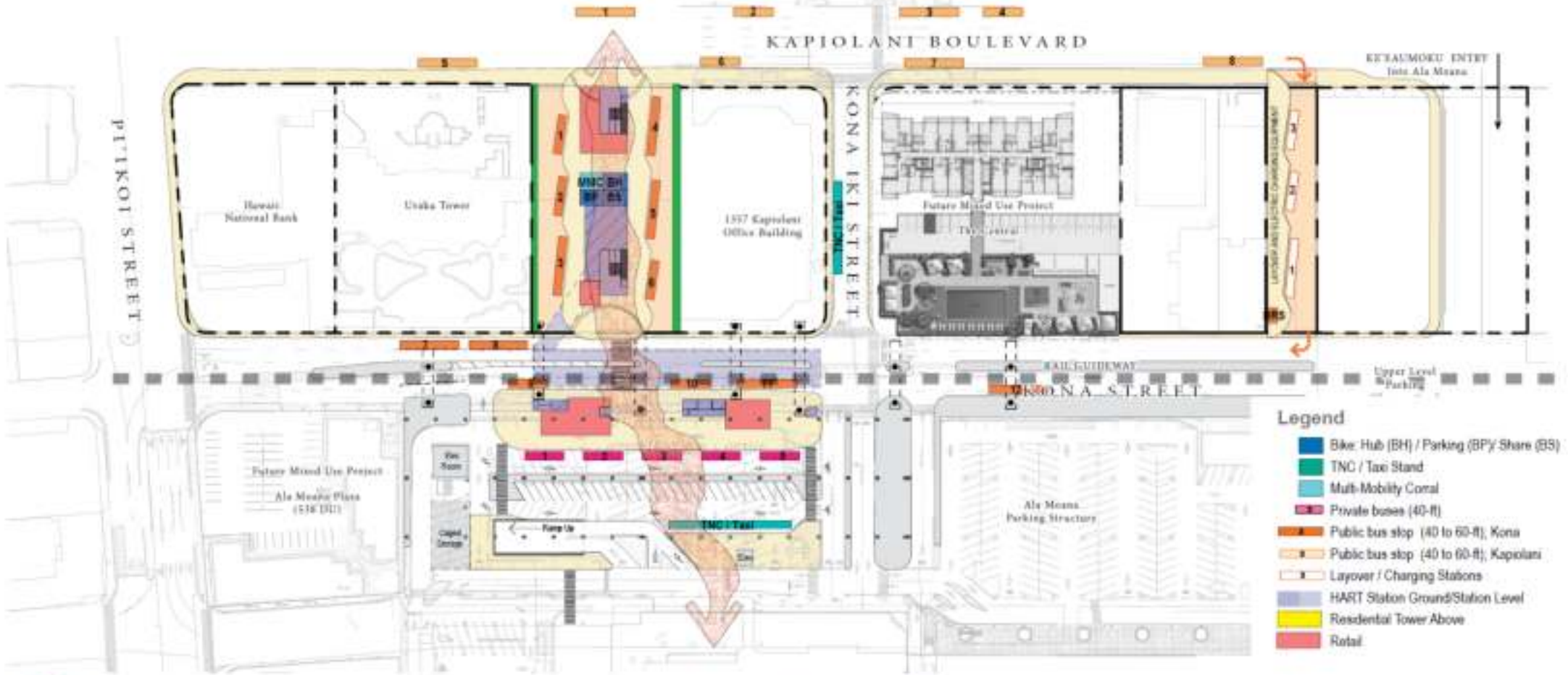
A

Parcel 1
Integrated Rail and Bus Plaza on Parcel 1

- Station touch down location per 2017 plan
- Mid-block plaza lined with retail from Kapiolani Boulevard to Kona Street
  - Potential for concourse level plaza that cross Kapiolani Boulevard
- Integrated transit station bus transit hub
- Private bus hub and Taxi/TNC within Ala Moana Parking Structure and on Kona Iki Street
- 8 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#6)
- 12 bus stops, 6 on Parcel 1, 6 on Kona Street
  - Handivan stop on Parcel 1 (#6)
- No residential development

Parcel 3
Layover Bus Stop and Driver Rest Station

- 3 layover bus stops with electric charging equipment
- Driver rest station



KALIA TRANSIT PLAZA

INTEGRATED TRANSIT CENTER (RAIL AND BUS) ON PARCEL 1

Scale: 1"=100' 0' 50' 100' 200' 300'

DRAFT Tier 2 Alternatives Diagrams
04/13/2021

02

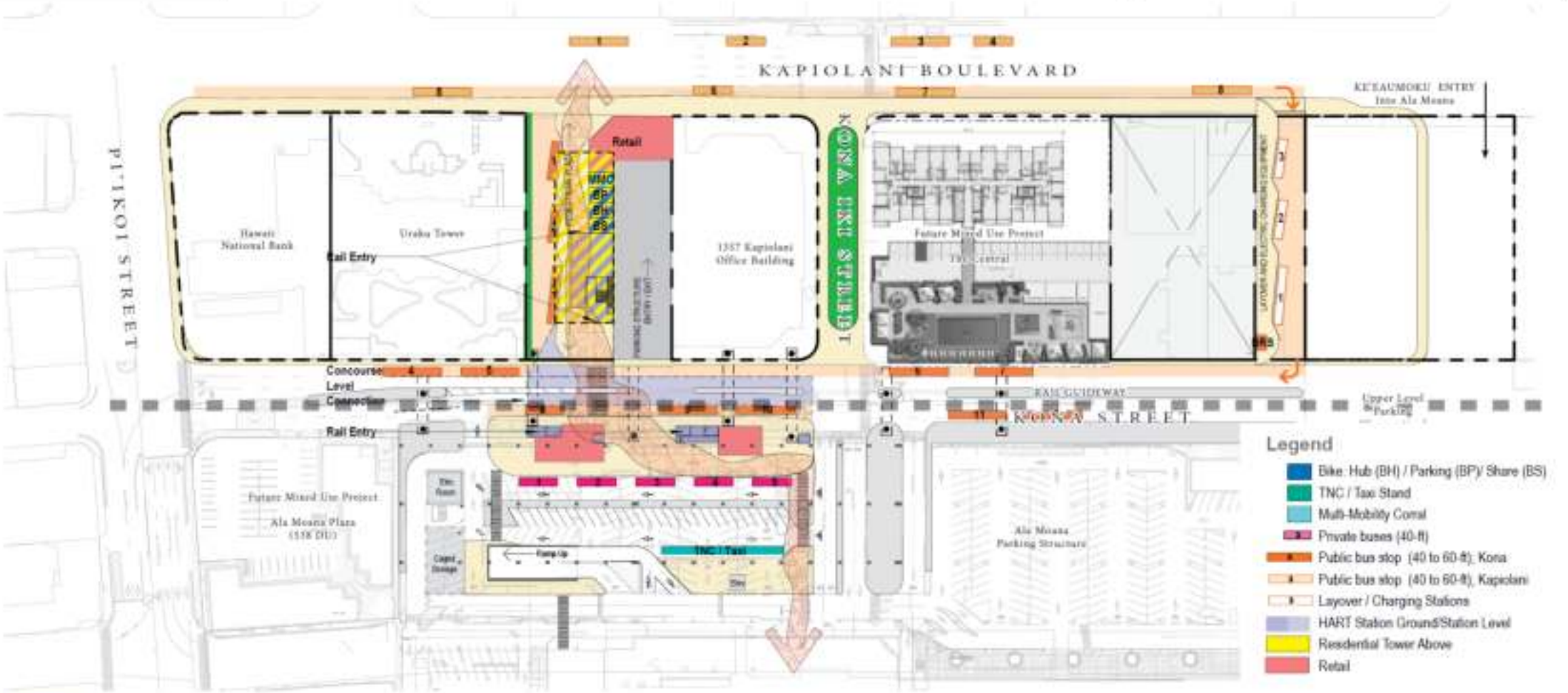
B

Parcel 1
Integrated Rail and Bus Plaza / Dedicated Bus Lanes / Kona Iki Street Pedestrian Plaza

- Station touch downshifted several feet to align with parking bay
- Potential mixed use development street level retail and residential tower
- Street level plaza lined with retail from Kapiolani Boulevard to Kona Street
- Modified Kapiolani Boulevard, Kona Street and Kona Iki Street
  - Dedicated bus lanes on Kapiolani Boulevard and Kona Street with clockwise bus circulation and bus stops
- 8 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#6)
- 12 bus stops; 3 on Parcel 1, 9 on Kona Street
  - Handivan stop on Parcel 1 (#2)

Parcel 3
Layover Bus Stop and Driver Rest Station

- 3 layover bus stops with electric charging equipment
- Driver rest station



KALIA TRANSIT PLAZA

DEDICATED BUS LANES ON KAPIOLANI BOULEVARD AND KONA STREET

Scale: 1" = 100'

0' 50' 100' 200' 300'

DRAFT Tier 2 Alternatives Diagrams
04/13/2021

04

C

Parcel 1
Grand Kapiolani-Kona Plaza

- Modified station touchdown configuration and location
- Potential mixed use development street level retail and residential tower
- Street level plaza lined with retail from Kapiolani Boulevard to Kona Street
- 8 bus stops on Kapiolani Boulevard
  - Handivan stop fronting Parcel 1 (#6)
- 12 bus stops; 6 in the AMC parking structure; 6 on Kona Street
  - Handivan stop on Parcel 1 (#6)
- Private buses to remain on other side of mall or find other location
- Retail integrated with the Bus Transit Hub in the AMC Mall Parking Structure
- TNC/Taxi station on Kona Street

Parcel 3
Layover Bus Stop and Driver Rest Station

- 3 layover bus stops with electric charging equipment
- Driver rest station

KALIA TRANSIT PLAZA

BUS TRANSIT HUB IN AMC MALL PARKING STRUCTURE

Scale: 1" = 100'

DRAFT Tier 2 Alternatives Diagrams
04/13/2021

06

Breakout Groups

What specific issues or concerns are most important in developing the Kalia Mobility Plaza?

How can this project improve transit and other modal (bike, ped) connections at Ala Moana Center?

Which of the three alternatives best serves the needs of the transit riders?

Which of the alternatives would be most effective at improving transfer connections between buses and with rail?

Next Steps in AA Process

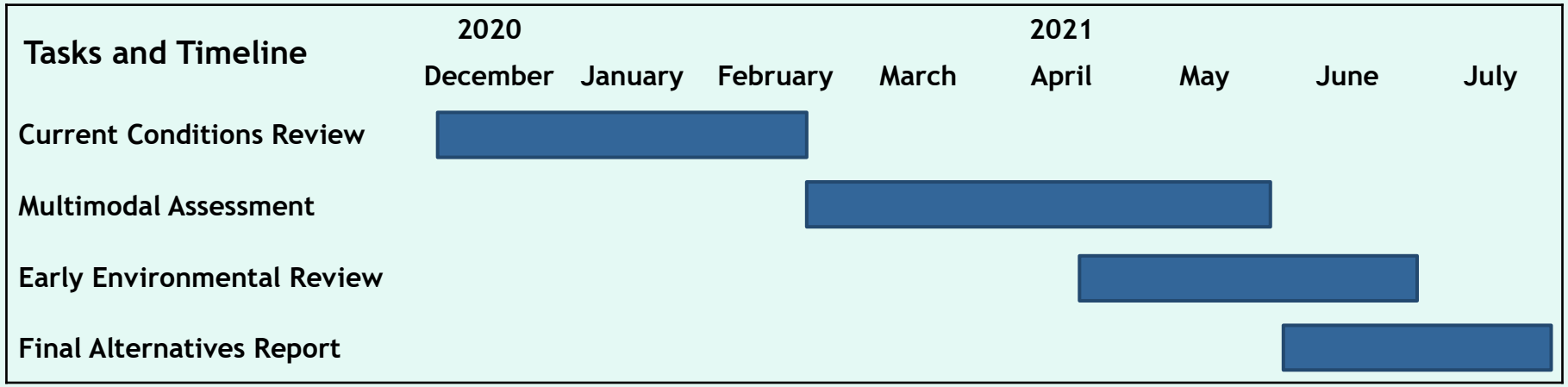
Stay Informed at:
www.honolulu.gov/completestreets/kalia

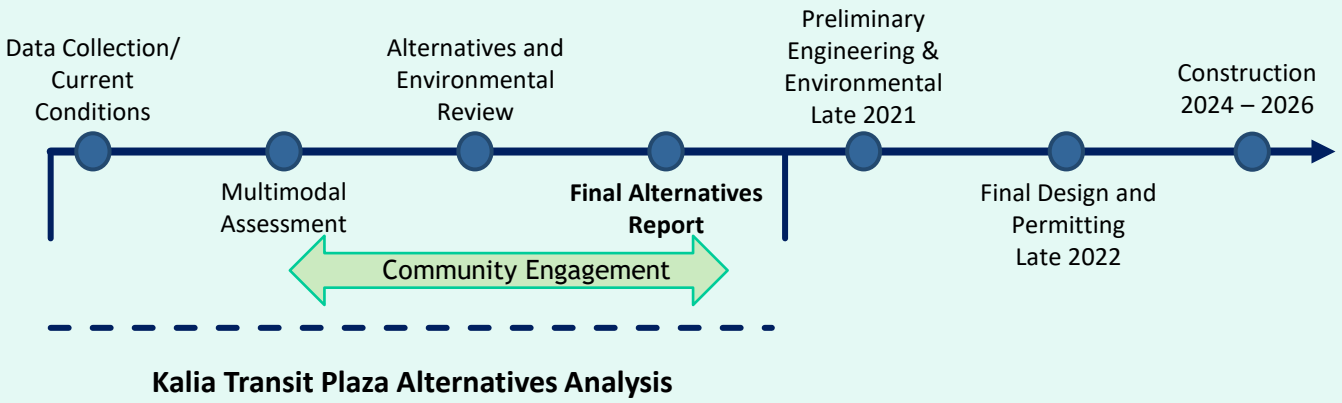
Mahalo

Scan code at right to reach the Kalia Mobility Plaza webpage to learn more about the Project and updates.

SCAN ME

Timeline for AA Process





Stay Informed at:
www.honolulu.gov/completestreets/kalia

Mahalo

APPENDIX G

Draft Letter and Handout for

Environmental Assessment Early Consultation

DEPARTMENT OF TRANSPORTATION SERVICES
CITY AND COUNTY OF HONOLULU

711 KAPIOLANI BOULEVARD, SUITE 1600
HONOLULU, HAWAII 96813
Phone: (808) 768-8305 • Fax: (808) 768-4730 • Internet: www.honolulu.gov

RICK BLANGIARDI
MAYOR

J. ROGER MORTON
DIRECTOR

JON Y. NOUCHI
DEPUTY DIRECTOR

TP9/22-888831

December 15, 2022

Mr.[Mrs.] Stakeholder First & Name, Credentials, Title
Company Name
Street Address
City, State, Zip

Dear Mr.[Mrs.] Stakeholder Name:

SUBJECT: Early Consultation Request for Environmental Assessment
Kālia Mobility Hub
1347 and 1423 Kapiolani Boulevard
Honolulu, HI 96814
Tax Map Key: (1) 2-3-039: 004, 016 and 017

The County Department of Transportation Services is undertaking the preparation of a Draft Environmental Assessment (DEA) for the "Kālia Mobility Hub" ("Project") located in Honolulu, Oʻahu, Hawaiʻi. The DEA will be prepared in accordance with Hawaiʻi Revised Statutes (HRS) Chapter 343, and Hawaiʻi Administrative Rules (HAR) Chapter 11-200.1.

We are conducting early consultation with agencies, elected officials, organizations and individuals who may be interested in the environmental review of this Project. Enclosed is an Early Consultation Handout, which includes a Project description and location map for your review.

If you would like to provide comments, please send via U.S. mail or email to the contact indicated below, no later than December 08, 2022.

City and County of Honolulu
Department of Transportation Services
711 Kapiolani Boulevard, Suite 1600
Honolulu, Hawaiʻi 96813
Attn: Regional Planning Branch Chief
Phone: (808) 523-5866
Email: KaliaMobilityHub@gmail.com

Thank you for your participation in the early consultation for this Project.

Very truly yours,

J. Roger Morton
Director

Enclosure: Early Consultation Handout

This Early Consultation Handout has been prepared in accordance with Hawai'i Revised Statutes (HRS) Chapter 343, and Hawai'i Administrative Rules (HAR) Chapter 11-200.1.

PROJECT INFORMATION SUMMARY

Type of Document:	Draft Environmental Assessment (DEA)
Project Name:	Kālia Mobility Hub
Applicant:	City and County of Honolulu (County) Department of Transportation Services 711 Kapiolani Boulevard, Suite 1600 Honolulu, Hawaii 96813
Accepting Authority:	City and County of Honolulu (County) Department of Transportation Services 711 Kapiolani Boulevard, Suite 1600 Honolulu, Hawaii 96813
HRS Chapter 343 Requirement:	Hawai'i Revised Statutes (HRS) Chapter 343-5 (1) Propose the use of state or county lands or the use of state or county funds
Project Location:	1347 and 1423 Kapiolani Boulevard Honolulu, HI 96814 *(Figure 1: Project Location)*
Tax Map Key (TMK) Parcels and Recorded Fee Owners:	TMK Parcels: (1) 2-3-039: 004 – County TMK Parcel: (1) 2-3-039: 016, 017 – Watamull Properties Corp.
Project Area:	TMK Parcel 004 – 0.29 acres (12,500 SF) TMK Parcel 016 – 0.79 acres (17,250 SF) TMK Parcel 017 – 0.22 acres (20,250 SF)
State Land Use District:	Urban District
County Zoning District:	BMX-3 – Business Mixed-Use District
Primary Urban Center Development Plan:	Urban District Rapid Transit Corridor
Special Management Area (SMA):	Outside SMA
Flood Zone:	Zone AE / Zone X (Parcel 006) Zone X (Parcels 016 and 017)

PROJECT SITE

The "Kālia Mobility Hub" ("Project") site is located on three parcels at 1347 and 1423 Kapiolani Boulevard in Honolulu, on the island of Oahu, Hawaii (refer to ***Figure 1: Project Location***).

The Project site includes three parcels in the Ala Moana neighborhood, located between Kapiolani Boulevard and Kona Street. The site is bordered by the Ala Moana Center (AMC) across Kona Street to the south and Kapiolani Boulevard to the north. The Project site is surrounded by a developing neighborhood with a transportation network serving commercial properties and multi-family residential buildings. To the north of the site are commercial and multi-family residential uses along the Kapiolani Boulevard and Keeaumoku Street areas. To the south is the AMC commercial complex, fronting Ala Moana Boulevard across from Ala Moana Beach Park leading to the Pacific Ocean.

The Project site is located within the State Land Use Urban District and classified as County Zoning BMX-3 District (Business Mixed-Use).

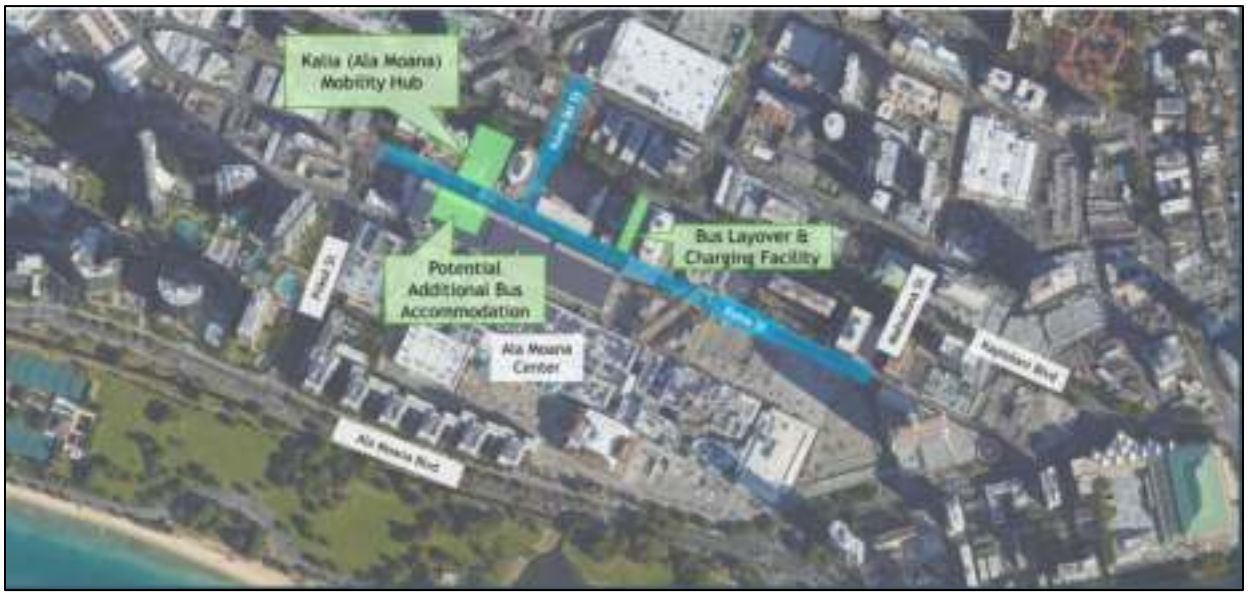


Figure 1. Project Location

OVERVIEW OF PROPOSED PROJECT

The AMC has been the major transportation hub for Honolulu for decades. The AMC is currently served by 25 of the City's public bus routes (TheBus), as well as by paratransit (TheHandi-Van) and private buses/trolleys (e.g., Waikiki Trolley). The City and County of Honolulu Department of Transportation Services (County) proposes to redevelop the three subject commercial mixed-use properties to create the Kālia Mobility Hub (refer to ***Figure 2: Kalia Mobility Hub Concept***).

- Parcels 016 and 017 (1347 Kapiolani Boulevard) will be redeveloped to provide a mixed-use development as Kālia Mobility Hub, with driveways, bus stops, driver support and staging facilities integrated with ground floor commercial uses and a multi-family residential tower, and other multimodal facilities, such as bicycle lockers and a Biki (bikeshare) station. As planned, the Kālia Mobility Hub will accommodate a future rail station.
- Parcel 004 (1423 Kapiolani Boulevard) will be redeveloped for TheBus driveways, layover bus stops, a driver support facility, and electric bus charging stations.

- Street improvements planned for Kapiolani Boulevard include new bus stops and potentially a future pedestrian overpass. Kona Street (Parcel 11) is planned to include new layover locations and sidewalk improvements.

The intended long-term objective for the Kālia Mobility Hub is to develop a multimodal transit center or mobility hub to provide efficient bus routing and passenger access.

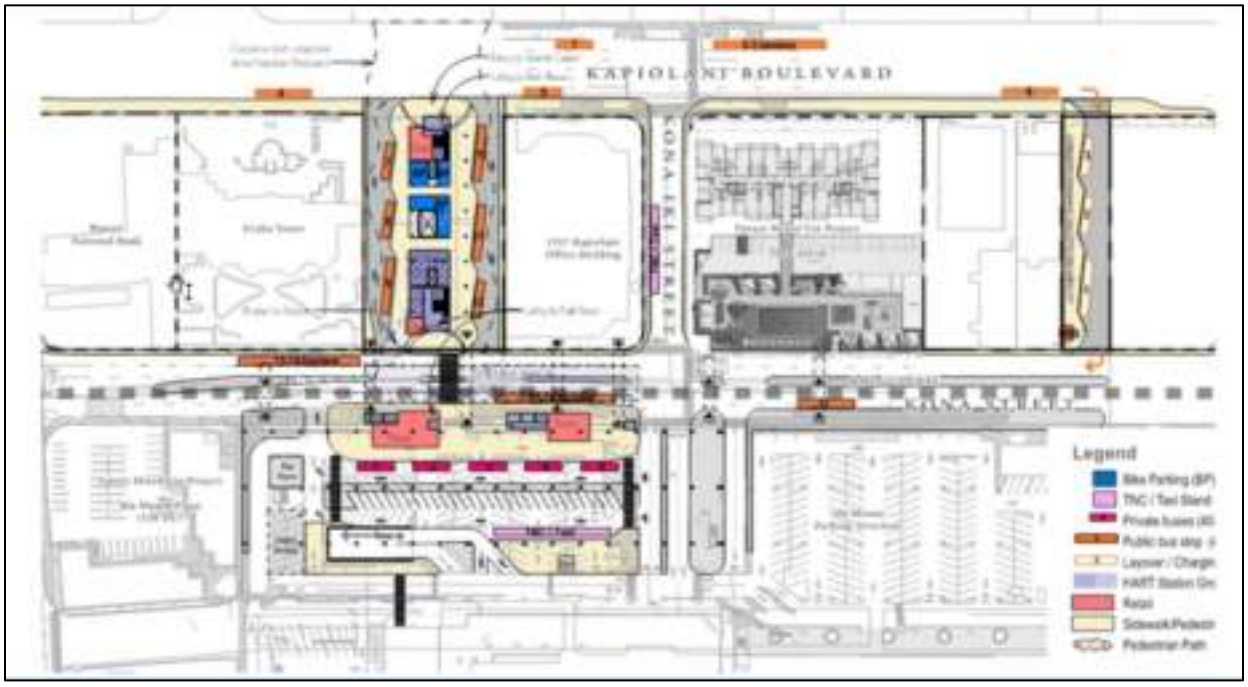


Figure 2. Kālia Mobility Hub Concept

Several prior studies and plans have investigated the long-term conditions including the *Bus/Rail Integration Plan for Ala Moana Center Station*, *Waikiki Regional Circulator Study*, *Station Access and Modal Interface Report* (2011), the *Ala Moana Neighborhood Transit-Oriented Development Plan* (2016)*, and the Alternatives Analysis for the Kālia Plaza Mobility Hub (2022).* These prior studies and plans outline a vision for the area including enhancing connectivity for riders of the rail and bus systems and providing complete streets that accommodate bus circulation and bus stops and facilitate first-last mile access for pedestrians and bicyclists. The Honolulu Authority for Rapid Transportation (HART) 2022 Recovery Plan includes an interim terminus for the Honolulu Rail Transit project at the Civic Center Station, located at the intersection of Halekauwila Street and South Street in Kakaako. The Kālia Mobility Hub will serve an important role in the interim providing critical bus system connectivity between the Civic Center Station, Ala Moana Center, Waikiki and the University of Hawaii at Manoa.

PURPOSE OF ENVIRONMENTAL ASSESSMENT

The County is undertaking the preparation of a DEA, pursuant to HRS Chapter 343-5 (1): Propose the use of state or county lands or the use of state or county funds. The DEA will be prepared in accordance with the content and procedural requirements of HRS Chapter 343 and HAR Chapter 11-200.1. The DEA will include a description of the Proposed Action and alternatives considered; a description of the existing environment; identification and analysis of potential impacts; and proposed mitigation measures.

The Kālia Mobility Hub will serve an important role in providing critical bus system connectivity between the Civic Center Station, Ala Moana Center, Waikiki and the University of Hawaii at Manoa. The purpose of the Kālia Mobility Hub is to:

- Provide efficient connections between Honolulu Rail Transit's Civic Center Station, and the future Kalia Station, and Honolulu's bus system (TheBus and TheHandi-Van).
- Promote safe access to the public transit system by reducing conflicts for pedestrians, cyclists, and other modes.
- Provide convenient pedestrian connections to existing and planned development in the area.
- Provide a bus facility that is readily accessible to individuals with disabilities and transit dependent populations, including those with low incomes.
- Provide a secure, safe, and inviting space for transit patrons.

Providing a connected multimodal system, promoting the use of public transportation, and providing infrastructure improvements for increased safety, better mobility, and a sustainable environment is consistent with goals of the *Plans* referenced above.

Improve Connectivity between Rail and Bus Systems

The Kālia Mobility Hub is the busiest transit center in TheBus system. Since the Kalia Rail Station will eventually be the eastern terminus of the rail system, there will be a large number of transfers between the rail system and buses traveling to and from activity centers further to the east, including Waikiki and University of Hawaii at Manoa (UH Manoa). Since bus is expected to be the most prevalent access mode at the Kalia Rail Station, providing efficient bus/rail connectivity is essential.

Improve Accessibility to Public Transportation System

Providing convenient access to the public transportation system at the Kālia Mobility Hub is important for providing a positive experience for the system's users and promoting use of the system. The Kālia Mobility Hub bus stops are currently dispersed across several blocks. In addition to the City's transportation services, Honolulu has private transportation carriers serving tourists and residents with a multitude of small and large buses. Many of these private passenger carriers have bus stops near City stops at the Ala Moana Center. Honolulu has also seen a surge of micro-mobility (e.g. bikeshare) and transportation network companies (TNCs) that have quickly changed how people travel and access public transportation. Therefore, intermodal transfers must be consolidated, and the connections must be convenient, to enhance the functionality of the transportation system and the user experience of the riders.

Improve Circulation for All Modes

The streets surrounding the TheBus system's Kālia Mobility Hub support not only the multitude of buses that currently operate in this area, but also automobile traffic, various tourist trolleys and charter buses, pedestrians, and cyclists. The circulation of these different modes in the AMC district needs to be designed in a way that promotes access, minimizes conflicts between modes, and enhances the overall public quality of life in the area. Walk/bike, after bus, will be the second largest mode of access. In addition, a fixed-route passenger survey found that approximately 45 percent of the TheBus system's passengers engage in other activities besides transferring between buses at the Kālia Mobility Hub. The large volume of activity in the area underscores the importance of sufficient sidewalks and facilities for pedestrians and cyclists for connectivity, as well as the efficient allocation of curb space for taxis, TNCs, and private trolleys and buses.

Improve Bus Operations

There are currently 25 fixed bus routes that operate in the AMC district, with multiple stops around the Kālia Mobility Hub. Many of these bus routes terminate at the Kālia Mobility Hub and use the area for

layovers. Bus operations would benefit from having sufficient bus staging and layover areas in a consolidated facility, reducing the need for unnecessary circulation and improving efficiency. As part of its resilience strategy, the City has established a goal of transitioning its bus fleet to electric vehicles by 2035. Bus charging equipment will be required at layover facilities to support the transition to an electric bus fleet.

Improve Safety

Visitors of the AMC district currently walk and cycle along many streets with high volumes of automobile traffic. The City has identified high pedestrian injury locations based on injury and fatality data provided by the Honolulu Police Department, the Department of Health/Emergency Medical Services, and the national Fatality Analysis Reporting System. These locations are prioritized into Tier 1 (very high pedestrian injury) and Tier 2 (high pedestrian injury) groupings. Within the Ala Moana district, both Piikoi Street and Keeaumoku Street are Tier 1 corridors, while Kapiolani Boulevard is a Tier 2 corridor. The intersections of Kapiolani Boulevard and Piikoi Street, Kapiolani Boulevard and Keeaumoku Street, and Kona Street and Piikoi Street are Tier 1 intersections. A high percentage *of* daily passengers would bike or walk to access the Kālia Mobility Hub. With such a large number of pedestrians and cyclists accessing public transportation, the safety of the users of the transportation facilities, of all ages and abilities, is imperative.

Improve Transportation Equity

Accessible, affordable transportation is vital to the livelihood of a community and its residents; it dictates how people can access good jobs, better education, and quality health care. Transportation equity is the fair distribution of travel resources to make sure that low-income communities and communities of color are not underserved and disadvantaged. In an on-board transit survey, 5 percent of riders on TheBus self-identified as having a disability, about half of the riders were women, more than 75 percent of the riders were people of color, and 66 percent of riders spoke a language other than English at home. There are also many riders in lower-income groups. Although the AMC is not directly located in an environmental justice (EJ) block group, there are various EJ block groups in a 0.5-mile radius of the transit center. The AMC area is transit dependent with a greater than average percentage of households with no vehicles than the overall service area. This Project will enhance access to a broader transportation system for people of color and low-income users.

Support Growth and Economic Development

Convenient access to jobs, housing, shopping, and recreation spurs economic development. High-value businesses are increasingly choosing locations in proximity to quality transit due to challenges in workplace accessibility, such as delay and congestion in an auto-centric commute. The Project will support TOD that can provide a variety of economic benefits, including an increased tax base, more jobs for local workers, and reduced congestion by concentrating a mix of uses in a walkable area. The Project could support goals and objectives of the *Ala Moana Neighborhood Transit Oriented Development (TOD) Plan*, such as to focus more intense development within the TOD precinct, to improve the quality and safety of the walking environment in the Ala Moana district, and to create active urban street edges through strong street frontages.

APPENDIX H

Preliminary Infrastructure Assessment Report

PRELIMINARY INFRASTRUCTURE ASSESSMENT REPORT

for

Kalia Mobility Hub at Ala Moana Alternatives Analysis

April 26, 2021
DRAFT
Revised: August 16, 2022

Prepared for:
Kimley-Horn
Los Angeles Office
660 South Figueroa Street
Los Angeles, CA 90017

Prepared by:

Architecture • Civil Engineering • Planning • Interior Design • Environmental Services
111 S. King Street, Suite 170, Honolulu, Hawaii 96813 (808) 523-5866

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

A	Area
AC	Asphalt Concrete
BMP	Best Management Practices
BWS	Honolulu, Board of Water Supply
BMX-3	Business Mixed Use – 3
C	Coefficient Factor
CAD	Computer Aided Design
CCH	City and County of Honolulu
cfs	cubic feet per second
DPP	Department of Planning and Permitting
DTS	Department of Transportation Services
DFIRM	Digital Flood Insurance Rate Map
FEMA	Federal Emergency Management Agency
FH	Fire Hydrant
Gal	Gallons
GIS	Geographic Information System
GPD	Gallons per day
GPM	Gallons per minute
HART	Honolulu Authority for Rapid Transportation
HECO	Hawaiian Electric Company
L	Length
LID	Low Impact Design
psi	Pounds per Square Inch Unit
Q	flow rate in cubic feet per sec
SCA	Sewer Connection Application
SU	Single Unit Truck Design Vehicle
Tc	Time of Concentration (minutes)
TOD	Transit Oriented Development
TMK	Tax Map Key
UPC	Uniform Plumbing Code
WWB	Wastewater Branch

1 INTRODUCTION

1.1 Overview

The Kalia Mobility Hub at Ala Moana project, under the jurisdiction of the City and County of Honolulu Department of Transportation Services (DTS), will support bus operations around the Ala Moana Transit Oriented Development (TOD) district adjacent to the proposed Honolulu Authority for Rapid Transportation (HART) Ala Moana Center (Kalia) Station. The station is in Honolulu, Oahu, near the Ala Moana Shopping Center. The bus transit center will connect bus riders to the proposed rail station and allow rail passengers to make connections to their final destinations via bus routes. The proposed bus transit center will also include electric bus charging stations, driver rest stations, paratransit, and transportation network companies (TNC) areas.

Full buildout and future development may include several options for the best use of the land, depending on the priorities of the City and input from the community. Some of the options include the addition of a high-rise residential tower, above the bus transit center, and retail space.

Refer to Figure 1- Vicinity Map

1.2 Purpose of Report

The purpose of this report is to assess the existing site infrastructure and determine the extent of infrastructure improvements necessary to support the proposed development of the proposed Kalia Mobility Hub, which include future development on city-owned parcels. Future development will be assessed either in conjunction or adjacent to the new bus transit center.

1.3 Existing Conditions

The project site consists of three Tax Map Keys (TMK) parcels identified as (1) 2-3-039: 016, por. 017, and 004, for a total project area of approximately 1.15 acres.

TMK's (1) 2-3-039: 016 and 017 consist of office buildings, multi-level parking lot, restaurants and clubs. These parcels are owned by the Watumull Properties Corporation and consist of most of the Kalia Mobility Plaza Transit Hub project area. The City and County is in the process of acquiring the properties, with the finalized sale yet to be confirmed.

TMK (1) 2-3-039: 004 consists of a commercial retail building and small surface parking area. The parcel is owned by the City and County of Honolulu. The project proposes to utilize this parcel as a bus layover and electric changing area, with one-way travel through connecting Kona Street to Kapiolani Boulevard. The shape and size of the parcel limits the development potential.

All parcels are zoned as Business Mixed Use – 3 (BMX-3) based on Land Use Ordinance (LUO) zoning designation provided by the City and County of Honolulu.

While the proposed Ala Moana Center (Kalia) Rail Station (TMK (1) 2-3-038:011) touch downs on the project site, the rail station will not be analyzed in this Preliminary Infrastructure Investigation Report. It will, however, be considered a future use within the project, although the station has not yet been built. The station location has been generally set and is the eastern end of the currently planned HART rail project.

Refer to Figure 2 for the Existing Conditions Map

1.4 Soils/Topography

The site is generally flat. The parcels located along Kona Street (TMK's (1) 2-3-039: 016, por. 017, and 004) generally slope toward Kona Street along the south side of the parcels, and slope to Kapiolani Boulevard along the north side. The elevations generally range from 5.5' at the north side of the site to about 4.5' at the southern boundary of the site.

The project site is situated on the coastal plain of Ala Moana, south of the flows of Ko'olau Range. The site consists of Fill Land, mixed (FL) in all directions.

Refer to Figure 3 for the Soils Map

1.5 Flood Hazard

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) for the project area, most of the project will be in Zone – "X", an area determined to be outside the 500-year floodplain parcel subject to any flood regulations. However, the southern half of TMK 2-3-039-004 is located within Zone – "AE= 6'", which consists of a flood hazard area with a base flood elevation (BFE) determined at elevation 6-ft. This section is within the Special Flood Hazard Areas (SFHAs) which is subject to inundation by the 1% annual chance flood.

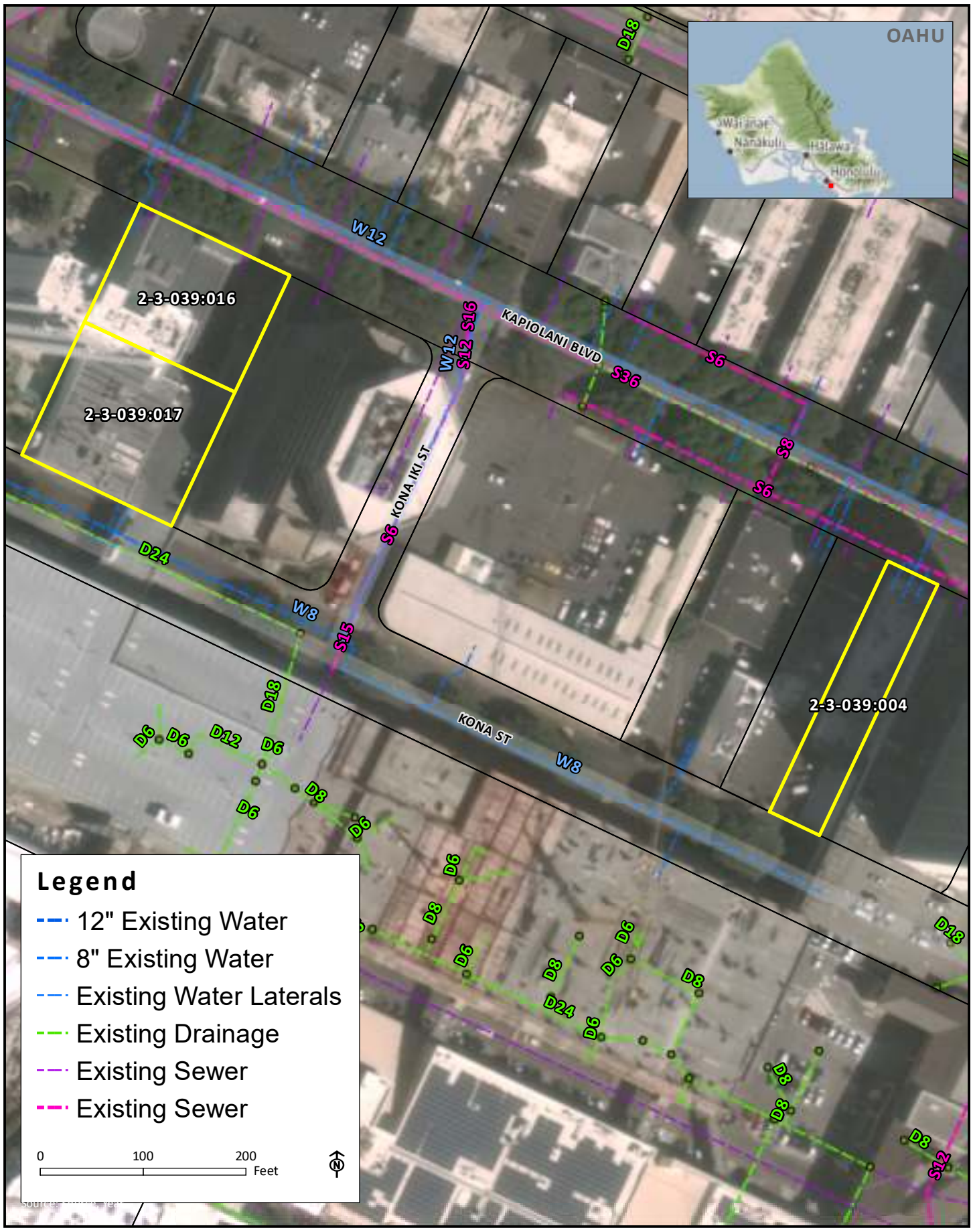
The effects of sea level rise on flood hazard areas from upland flooding is not yet fully studied. However, planning for the project should consider the effects of sea level rise and coastal flooding and their impacts to the groundwater table, buried infrastructure, and upland flooding. Consideration should be taken for potential areas not currently within the SFHA within the project site that may be added to the SFHAs, a result of potentially higher base-flood elevations.

Refer to Figure 4 for the Flood Hazard Map from FEMA.

220051-01 DTS Ala Moana

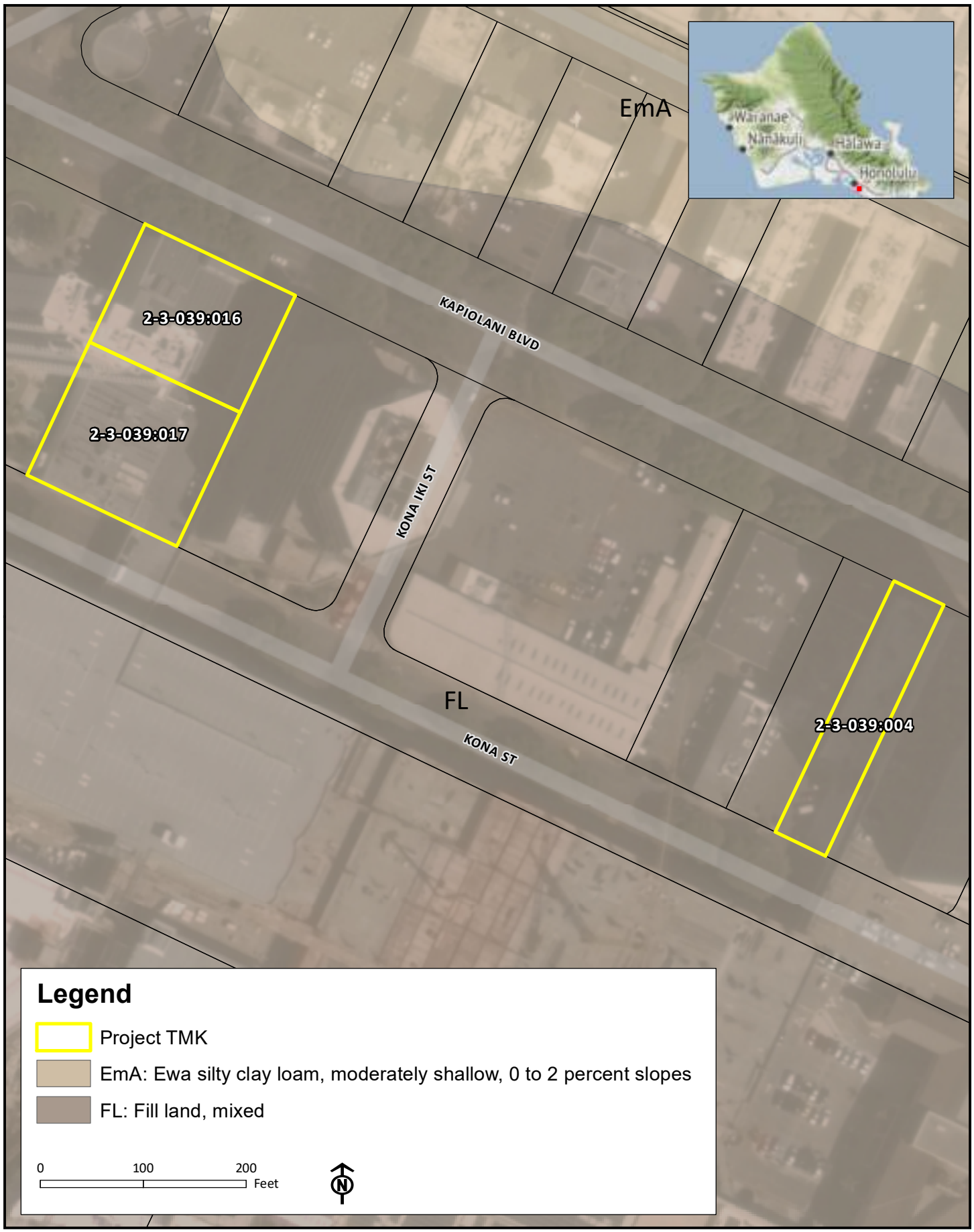
Figure 01 - Vicinity Map

GTO



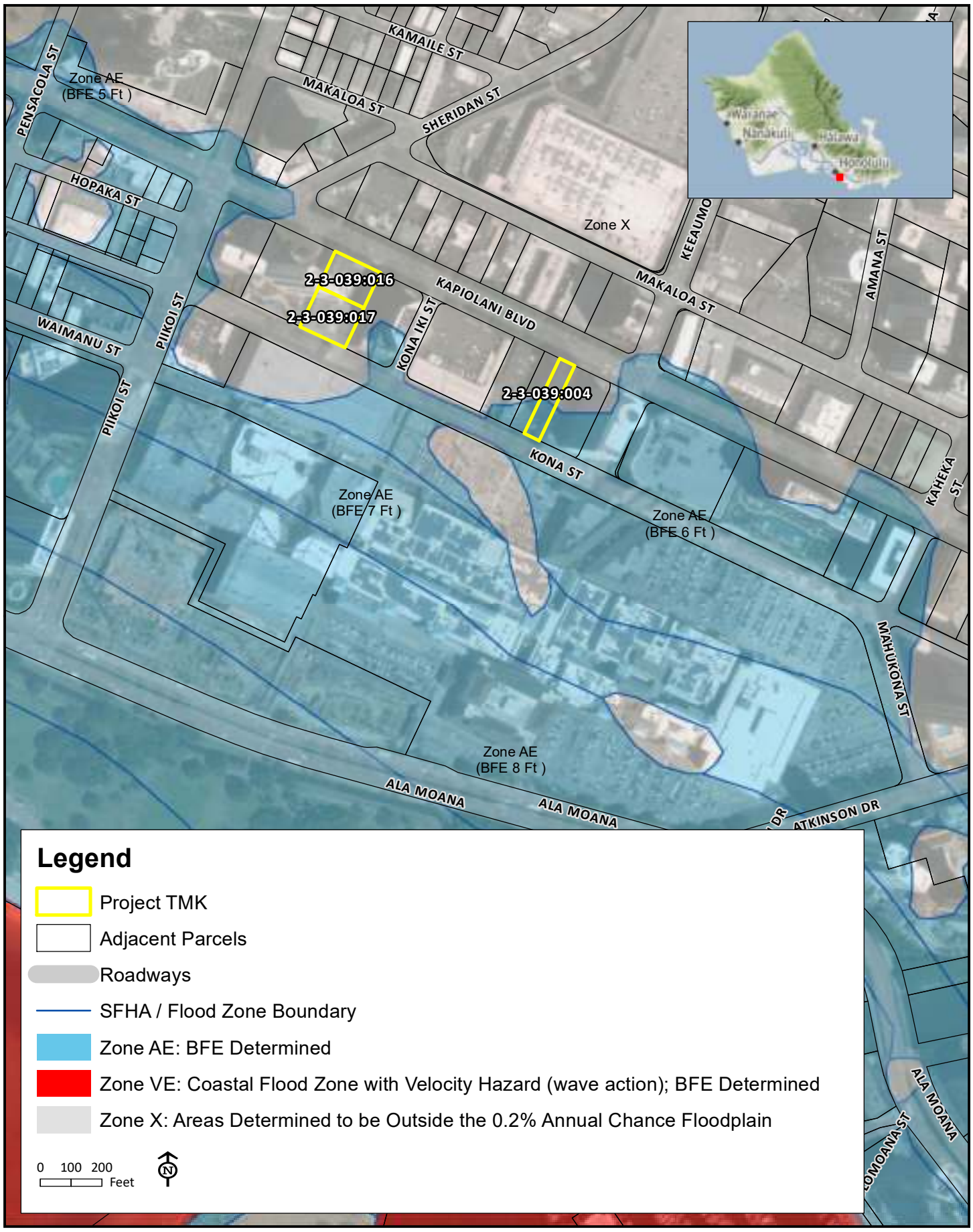
220051-01 DTS Ala Moana

Figure 2 - Existing Infrastructure



220051-01 DTS Ala Moana

Figure 03 - Soils Map



220051-01 DTS Ala Moana **Figure 04 - Flood Insurance Rate Map**

2 EXISTING INFRASTRUCTURE

2.1 Roadways

Kona Street (private) and Kapiolani Boulevard (City) are the primary roadways that serve the Project site.

Kona Street is an asphalt paved road, owned and maintained by General Growth Properties Ala Moana LLC. The ROW is approximately 60-feet-wide with two lanes in each direction and a curbed median. Access to Kona Street is available to the public, including city bus access adjacent to the parking structure at Ala Moana Center.

Kapiolani Boulevard is an asphalt paved road, owned and maintained by the State Department of Transportation (HDOT) Highways Division. The ROW is approximately 90-feet-wide with three lanes in each direction.

Kona Iki Street (privately owned and maintained by General Growth Properties Ala Moana LLC) is also located in between the western and eastern parcels and serves as a connector street between Kapiolani Boulevard and Kona Street. While none of the project sites directly border Kona Iki Street, improvements may be required along Kona Iki Street to support the bus transit center. Kona Iki Street is on the same TMK as Kona Street. ROW is approximately 50-ft wide with one lane in each direction. Access to Kona Iki Street is available to the public, including city bus access adjacent to the parking structure at Ala Moana Center.

2.2 Access and Pavements

Vehicular access to the project parcels is provided by Kapiolani Boulevard or Kona Street. Vehicular access along Kona Street appears to be the primary access to the parking areas for TMK: 2-3-039-017 via an existing driveway apron. A driveway apron for TMK: 2-3-039-016 allows for vehicular access along Kapiolani Boulevard. There are two driveway aprons, one on Kona Street and one on Kapiolani Boulevard for TMK: 2-3-039-004.

On-site, there are small areas of asphalt and concrete pavement around the existing buildings, with small parking lots on each parcel.

Pedestrian access to the site is currently provided through Kapiolani Boulevard or Kona Street. An approximately 4’ wide sidewalk is located along the north side of Kona Street and 6’ wide sidewalk on the south side of Kapiolani Boulevard that allows pedestrians to walk along the project's north and south entrances. Pedestrian access is provided by publicly accessible sidewalks on Kona Street and Kapiolani Boulevard, but pedestrian access through the lots that connect both streets is not provided. Pedestrians must walk to Kona Iki Street. The sidewalk along Kona and Kona Iki Street is privately owned and operated but allows for public access. The current sidewalk is in poor condition along Kona Street.

Sidewalks on Kona Street and Kapiolani Boulevard provide access to bus stops on both streets.

2.3 Existing Buildings and Ala Moana Center Parking Structure

TMK: 2-3-039: 017 consists of a three-story building with parking area on the ground level, with restaurants and clubs on the upper levels. This building will be demolished to allow for redevelopment of the site into the transit center.

TMK: 2-3-039: 016 consists of a two-story building with office spaces on both levels. There is surface parking around the building. This building will be demolished to allow for redevelopment of the site into the transit center.

TMK: 2-3-039: 004 consists of two, two-story buildings with parking area on the ground level, and office spaces and retail stores on both levels for both buildings. These buildings will be demolished to allow for redevelopment of the site into the bus layover and recharging areas.

The Ala Moana Center parking structure (TMK: 2-3-038: 014) is to south of the project area and may be considered to be used for a portion of the bus transit center though an agreement with General Growth Properties Ala Moana LLC. This parking structure is owned by General Growth Properties Ala Moana LLC and is privately operated. The parking structure has existing support columns for the parking structure that must be considered for routing of buses on the ground level of the parking structure.

2.4 Wastewater Infrastructure

Per City records, there is one sewer main in Kapiolani Boulevard that services the properties within the area of the project. A 36-inch sewer main line on the south side of Kapiolani Boulevard provides the direct service to the project parcels.

A 6-inch lateral tees off the 36-inch main and serves TMK 2-3-039: 016. TMK 2-3-039: 017 is served from a 6-inch lateral that traverses through TMK 2-3-039: 016 (via utility easement). TMK 2-3-039: 004 is served from a 6-inch lateral off the main 36-inch line from Kapiolani Boulevard.

The 36-inch existing main flows in the west direction, and sewer flows from this area are ultimately conveyed to the Sand Island Wastewater Treatment Plant.

There is an additional 21-inch sewer main in Kapiolani Boulevard near the Piikoi Street intersection that does not provide direct service to the project parcels.

2.5 Water Infrastructure

Based on BWS as-builts of the area, a 12-inch BWS water main on Kapiolani Boulevard connects to an 8-inch BWS main along Kona Iki Street. The main on Kona Iki Street connects to an 8-inch BWS operated water main along Kona Street, south of the proposed transit center. This line connects to a BWS-owned 12-inch line toward Piikoi Street. These mains serve all TMK's within the project area, via service laterals and meters.

TMK 2-3-039: 016 is served by the 12-inch main on Kapiolani Boulevard. A water lateral and meter connects the parcel to the water main.

TMK 2-3-039: 017 is served by the 8-inch main on Kona Street. A 4-inch cast-iron (CI) lateral and meter from the water line connects the parcel to the water main.

TMK 2-3-039: 004 is served by the 12-inch main on Kapiolani Boulevard. A single lateral branches into three (3) sub-laterals from the water line connecting the water main to the parcel.

For portions of Ala Moana Center, an existing 8-inch (TMK 2-3-038: 011) private water line and 8-inch x 2-inch FM meter serve the existing structures on-site from the 8-inch water main in Kona Street.

Four fire hydrants that are approximately 200 feet apart are located on the sidewalk along Kona Street. The hydrants on Kona Street are fed from BWS 8" water main. Fire hydrant #M02538

fronts TMK 2-3-039:017 (the future Ala Moana Center (Kalia) Rail Station), fire hydrant #M02537 fronts TMK 2-3-039:19, #M02540 fronts TMK 2-3-039:011, and fire hydrant #M02541 fronts TMK 2-3-039:001.

Three fire hydrants that are approximately 200 feet apart are located on the sidewalk along Kapiolani Boulevard. The hydrants on Kapiolani Boulevard are fed from BWS 12" water main on Kapiolani Boulevard. Fire hydrant #M02023 fronts TMK 2-3-039:016 (the future Ala Moana Center (Kalia) Rail Station), fire hydrant #M07888 fronts TMK 2-3-039:011, and fire hydrant #M07889 fronts TMK 2-3-039:001.

BWS was contacted to obtain the available flow and pressure in the 8-inch main in Kona Street and 12-inch main on Kapiolani Boulevard.

For the hydrants on Kona Street, BWS reported that Hydrant #MO2538 has a static pressure of 77 psi, and a residual pressure of 48 psi at a flow rate of 4,000 gallons per minute. Hydrant #M02537 has a static pressure of 77 psi and a residual pressure of 46 psi at a flow rate of 4,000 gallons per minute. #M02540 has a static pressure of 77 psi and a residual pressure of 49 psi at a flow rate of 4,000 gallons per minute. #M02541 has a static pressure of 77 psi and a residual pressure of 51 psi at a flow rate of 4,000 gallons per minute. All values are based on modeled flow by the Board of Water Supply.

For the hydrants on Kapiolani Boulevard, BWS reported that Hydrant #MO2023 has a static pressure of 77 psi, and a residual pressure of 54 psi at a flow rate of 4,000 gallons per minute. Hydrant #M07887 has a static pressure of 77 psi and a residual pressure of 52 psi at a flow rate of 4,000 gallons per minute. #M07889 has a static pressure of 77 psi and a residual pressure of 61 psi at a flow rate of 4,000 gallons per minute. All values are based on modeled flow by the Board of Water Supply.

2.6 Drainage Infrastructure

Concrete curb and gutter can be found around the project parcels and project area within the public and private roads. Runoff travels via gutters to drain inlets at curb inlets and is ultimately discharged to the municipal piped drainage system. Refer to **Figure 5- Hydrologic Map- Existing Conditions**.

Each of the project's parcels is currently paved or developed with impervious surfaces (buildings and structures). Runoff from TMK 2-3-039:017 and TMK 2-3-039:004 appears to either overland flow toward Kona Street or is discharged through concrete curbs, gutters, or sidewalk drains to the surface of Kona Street. TMK 2-3-039:016 appears to overland flow into Kapiolani Boulevard.

Within Kona Street, runoff sheet flows toward the center of the roadway (inverted crown). A concrete gutter along the median island curb conveys water to a curb inlet catch basin. The curb inlet catch basins in Kona Street are served by a 24" storm drain line owned by General Growth Properties Ala Moana LLC. The drain line slopes west and connects to a 96" x 48" box culvert on Piikoi Street, owned by the City and County. The box culvert along Piikoi Street runs in the southern direction through Ala Moana Beach Park and terminating at the Pacific Ocean.

Within Kapiolani Boulevard, runoff sheet flows toward the curb along the roadway (crowned). A gutter along the road conveys water to existing curb inlet catch basins that connect to an existing 48" x 48" box culvert, owned by the City and County. The storm structure runs east and connects to a 72" x 60" box culvert though a utility easement near Mahukona Street. The box culverts runs in the southern direction though Ala Moana Beach Park and terminating at the Pacific Ocean.

2.7 Electrical and Telecom Infrastructure

Based on information provided by Hawaiian Electric Company (HECO), HECO 12 kV and 25 kV distribution systems serve the area around the project parcels, but both systems are at capacity. With redevelopment ongoing near Ala Moana, much of the capacity is already occupied by new projects either already served, planned, or pending services requests.

2.8 Gas Infrastructure

Based on as-builts provided by Hawaii Gas, a 2” line from Kapiolani Boulevard runs though TMK: 2-3-039-016 and terminates at the boundary of TMK: 2-3-039-017. There appear to be no gas infrastructure at TMK: 2-3-039-004.

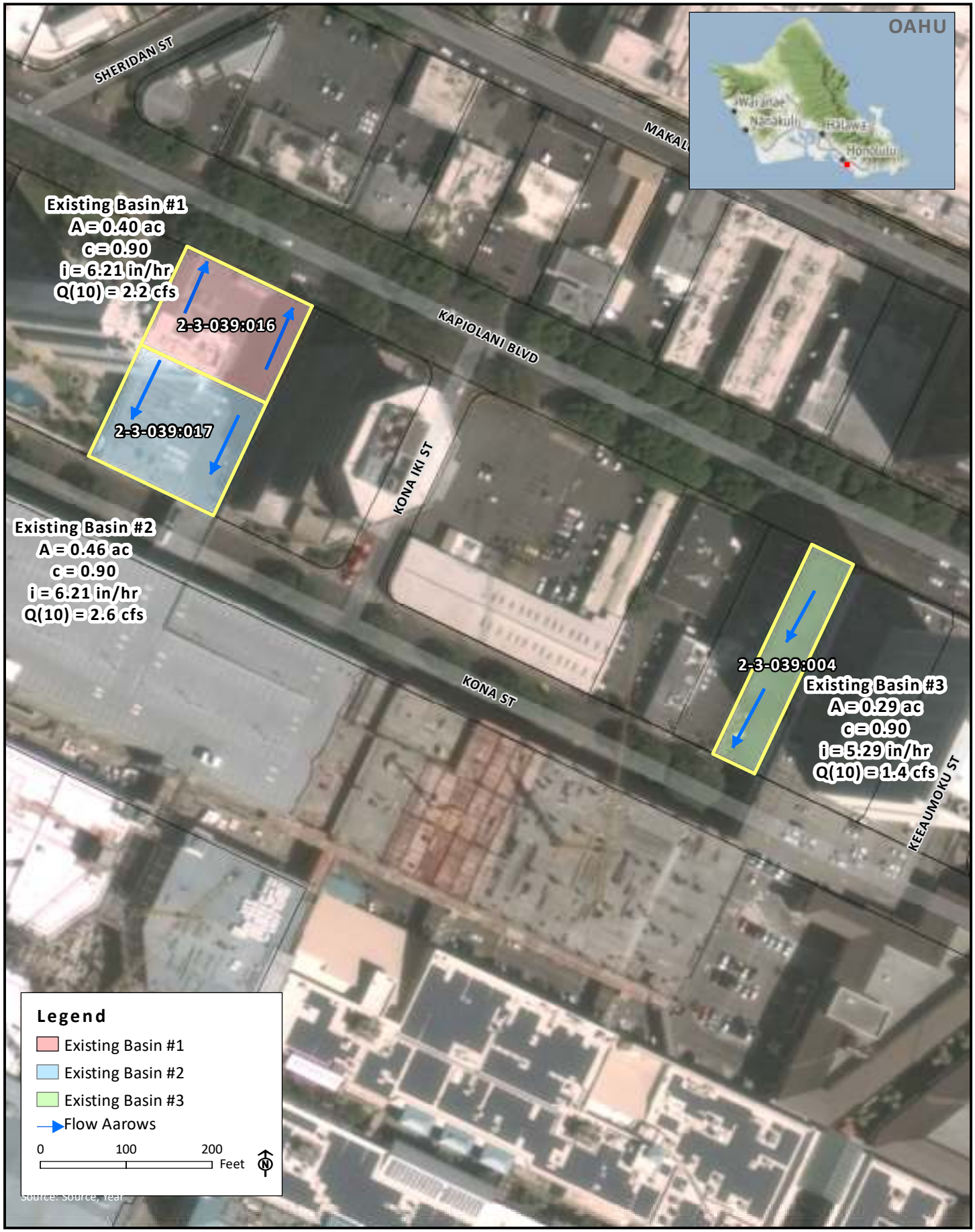


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Figure 05 - Hydrologic Map, Existing Conditions

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3 PROPOSED INFRASTRUCTURE

3.1 Roadways

No major off-site improvements are anticipated to be required to public roadways due to the build-out nature of the region. New driveway aprons at Kapiolani Boulevard will be utilized to enter the bus transit center coming from the west. Traffic patterns are not expected to be significantly affected. Buses arriving from the west will enter driveway aprons on Kapiolani Boulevard and/or Kona Street. Buses arriving from the east will need to enter the transit center from Kona Street.

Traffic signal modifications are anticipated at the intersection of Kapiolani Boulevard and Kona Iki Street. A dedicated west-bound, left-turn lane will need to be striped at this intersection and a 5-section traffic signal head is needed to provide a protected left-turn phase. These improvements are necessary to facilitate access to the mobility hub for buses arriving from the east. In addition, timing modifications may be done at signals near Keeaumoku and Piikoi Street to account for more buses. Improvements to Kona Street and Kapiolani Boulevard include new pavement striping, lane reconfigurations (bus-only lanes, left-turn storage, etc.), and asphalt concrete pavement resurfacing where it is in poor condition. An additional traffic study will be needed to confirm timing modifications and lane reconfigurations.

Bus stop and bus zone concrete pads within Kapiolani Boulevard and Kona Street may be required where new bus stops are placed, or existing pads must be repaired.

Future traffic analysis will be required for the proposed high-rise residential tower.

3.2 Access and Pavements

Once constructed, bus and vehicular access to and from the sites will be provided along Kapiolani Boulevard and Kona Street. Driveways should be at widths that accommodate bus access lanes. Personal vehicles will not be allowed into the transit center. Transportation network companies (TNC) vehicles will be servicing the vicinity at designated areas.

Bus maneuvering, including at the bus stops in the mobility hub (TMK: 2-3-039-016 and TMK: 2-3-039-017) are accommodated on site. Some buses may wait at the layover and electric charging equipment area (TMK: 2-3-039-004), for breaks and to provide opportunity for charging between runs. Three electric bus charging stalls will be provided, and buses may remain parked in the charging stalls temporarily.

Public vehicle parking stalls for the rail station, bus transit facility, and potential retail area are not anticipated. If a parking lot is later incorporated in the transit center, entrances off Kona Street and Kapiolani Boulevard would be available for patrons entering from the East and West directions, respectfully.

Private vehicle entrance and exit for the potential high-rise development would likely enter and exit on Kona Street, with the finalized layout to be confirmed by the high-rise developer based on similar projects in the vicinity.

New sidewalks and crosswalks will be provided throughout the Kalia Mobility Hub to allow pedestrians to safely move from the bus transit center to the Ala Moana Center (Kalia) Rail Station entrance along Kona Street, or transfer to other buses on site or on-street. Bus stops are strategically placed close to the rail station. Pedestrians may enter the Bus Transit Center through the public sidewalks and frontage along Kona Street and Kapiolani Boulevard. The preferred site

design also includes the possibility of implementing a pedestrian overpass over Kapiolani Boulevard that connects the proposed transit center with the parcels north of Kapiolani Boulevard.

If the transit center can be accommodated and future development built without impacting the new station, concrete pavement shall be used to support the heavy bus use.

Refer to Figure 6 & 7 - Site and Utility Plans 1 and 2

3.2.1 Proposed Fire Protection Access and Requirements

Design of the sites, structures, and fire access and water supply systems for the project will be based upon the State Fire Code: National Fire Protection Agency (NFPA) 1, Uniform Fire Code, dated 2012 and all additional amendments as part of the Hawai'i Administrative Rules (HAR) Title 12, Subtitle 7, Chapter 45.2 with City and County of Honolulu amendments. Additional requirements are noted in the BWS Water System Standards, dated 2002. Based upon the above referenced standards, the following criteria should be met in terms of adequate fire access and water supplies:

- Road Width = Unobstructed 20 ft.
- Road Vertical Clearance = Unobstructed 13.5 ft.
- Surface = Capable supporting 73,000 lbs and constructed with an all-weather material.
- Turning Radius = 42 ft. minimum on outside front wheel. 28.4 ft. minimum on inside rear wheel.
- Dead Ends = Provide appropriate turnaround (cul-de-sac or hammerhead).
- Signage = Required for entire length of roadway.
- Provide an adequate fire water supply, capable of supplying the required fire flow as determined by BWS Water Standards, dated 2002.
- Provide a residual pressure of 20 psi for on-site hydrants.
- Hydrant spacing at 250 ft. (applied to private driveways).
- Fire Department Connections (FDCs) for sprinkler systems should be placed on the address side of the building and within 50 ft. of an adequate water supply / fire hydrant.
- Further coordination with the Honolulu Fire Department (HFD) will be required as the design progresses.

3.3 New Building Structures and Site Features

The preferred site and building designs for the project (TMK: 2-3-039-016 and TMK: 2-3-039-017) include a mid-block plaza spanning from Kapiolani Boulevard to Kona Street with integrated bus stops and retail space. The design also includes a residential tower with dwelling units ranging between 330 to 370 units. The preferred design will have an additional six bus stops on Kapiolani Boulevard, and five bus stops on Kona Street. A layover and electrical recharging station on TMK 2-3-039-004 with a driver's rest station is also planned.

Variations to the preferred design include the integration of a pedestrian overpass over Kapiolani Boulevard providing connectivity to the parcels north of Kapiolani Boulevard, and the inclusion of vehicle parking for the future residential tower. There are also variations to the preferred design that includes private bus or trolley hub and TNC or taxi areas within the Ala Moana parking structure and/or along Kona Iki Street.

A new driver rest station will be constructed to service the bus operators, near the layover area (TMK: 2-3-039:004). The Kalia Mobility Hub would likely have restroom facilities, pending final design.

Short-term bicycle parking will be provided on site via bike racks at the transit center. This will allow riders to park their bikes for a short period of time while using the public transportation system. Bike lockers are a bike room will be provided for long-term bike parking. In addition, space will be provided for a bike share station at the mobility hub.

For the transit center, no fencing is anticipated along Kona Street and Kapiolani Boulevard frontage to allow for an inviting feel. Fencing will be provided adjacent to neighboring properties, however. Security features will be installed to deter unwanted activities on-site, and site lighting will adequately be addressed.

Along the layover and recharge area, possible fencing may occur around the drivers rest area, and possible perimeter gates and fences to restrict access to the layover stalls.

3.4 Proposed Wastewater Infrastructure

A Sewer Connection Application (SCA) for the bus recharging station (TMK: 2-3-039-004) was submitted and approved by the Department of Planning and Permitting (DPP), Wastewater Branch (WWB) on May 27,2021 (2021/SCA-0676).

A Sewer Connection Application (SCA) for the transit center (TMK: 2-3-039-016:017) was submitted and approved with conditions by the Department of Planning and Permitting (DPP), Wastewater Branch (WWB) on May 27,2021 (2021/SCA-0677).

The proposed development will require wastewater service and a new connection to the existing wastewater system. The approved SCA's indicates available sewer capacity for the project's proposed uses which include a new 630-unit residential tower with 1-bedroom units, retail spaces totaling 25,000 square feet, a new comfort station, and restrooms for bus drivers. The preferred design incorporating the proposed residential tower includes 340 to 370-units, well below the proposed 630-unit, 1-bedroom residential tower requested in the sewer connection application.

The proposed sewer connection(s) would likely connect to the existing 6-inch sewer lateral, through utility Easement 'F'. The existing 6-inch sewer lateral connects to the 36-inch sewer main along Kapiolani Boulevard. Sewage generated by the retail usage is anticipated to be minimal, consisting of several employees or customers utilizing the space throughout the day. Each employee is anticipated to generate 25 gallons per day of wastewater usage, per full-time equivalent (FTE).

Within the layover area, the drivers rest station will add a smaller sewage output due to the station being exclusively used by City bus drivers. The generation of wastewater per day is not anticipated to have a significant impact to the City's municipal sewer system. A proposed 6-inch sewer pipe would connect to the 6-inch existing sewer lateral, which connects to the existing 36-inch sewer main along Kapiolani Boulevard.

Refer to Figure 6 - Site and Utility Plans 1

3.5 Proposed Water Infrastructure

A water availability request was sent to BWS for the proposed transit center, electric bus charging stations, bus layover area, retail area and high-rise building project. BWS is able to provide adequate water demand for the proposed conditions, dated April 30th, 2021.

Transit Center, no residential tower, no retail area, and a possible public restroom:

With the design alternative with no residential tower or retail area, the transit area (TMK 2-3-039:016, 017 may have a public restroom. The only water connections would be for irrigation and the possible public restroom. A new domestic water lateral would connect to the existing 8-inch water line along Kona Street, within utility Easement F. Existing water meters would be replaced accordingly and sized to meet the development's demands. The addition of a comfort station could be in any or all alternatives.

The final alternative includes a potential 330 to 370-unit residential tower on top of the public restroom and retail area. The water lateral and meter size will be determined based on the demand. Due to the large demands from a residential tower, water availability should be confirmed with BWS for this high-density use. Regional water mains in Kona Street, Kapiolani Boulevard, and Kona Iki Street or other surrounding roads may need to be up sized or replaced. New laterals serving both domestic and fire water service for the high rise will be needed, size to be determined, and booster pumps will be needed to serve a high-rise structure.

The layover area is anticipated to have a very small water demand for the driver's rest station, and less demand than currently used by the commercial spaces on property. The rest station would require a new service lateral and connect to the existing 12" main in Kapiolani Boulevard. The existing service lateral to the property may be re-used depending on size and condition.

3.5.1 Proposed Fire Protection Water Supply

There are four existing offsite fire hydrants located on Kona Street and Kapiolani Street, respectfully, within the right of way that provide fire protection to project site. **Refer to Figure 6-Site and Utility Maps.**

According to BWS Standards Table 100-19 – Fire Flow Requirements for neighborhood business is 2,000 gallons per minute, which would cover the Transit Center and proposed residential tower and is able to be provided by the BWS system. Only the high-rise residential tower is anticipated to require automated sprinkler systems.

3.6 Proposed Drainage Infrastructure

3.6.1 Design Criteria

Site drainage infrastructure shall be designed to the City and County of Honolulu, Department of Planning and Permitting, Rules Relating to Storm Drainage, dated August 2017. Building drainage systems shall be designed to the City and County of Honolulu Revised Ordinances of Honolulu, per articles related to the Plumbing Code.

3.6.2 Hydrology

The Rational Method can be used to compute peak stormwater runoff flow rates since the total project site drainage area is less than 100 acres per the City and County of Honolulu (CCH) Storm Drainage Standards. As required by the standards, the 10-year recurrence interval shall be used to size drainage facilities for the project.

The Rational Method formula is as follows: $Q=CIA$

Where:
- Q = Peak Runoff Flow Rate (Cubic feet per second)
- C = Coefficient of Runoff
- I = Rainfall intensity in inches per hour (in/hr.) for a duration equal to the time of concentration (Tc)
- A = Total drainage area (acres)

Rainfall in this location for the 10-year interval was determined to be 2.3 inches from the Rules Relating to Storm Drainage Standards of Honolulu Plate 1. Using Plates 1 and 4 to determine the appropriate intensity and Correction Factor (CF) respectively, the Pre-Development runoff from the impacted project area is 6.19 cubic feet per second (cfs) and Post Development runoff is anticipated to be 5.84 cfs for the projected project area. Refer to Tables 1 and 2, and Figures 5 and 7.

Table 1 Pre-Development Hydrologic Conditions:

Drainage Area	**A (acres)**	**Weighted (C)**	**Tc (min.)**	**I(10) (in./hr.)**	***Q(10) (cfs)***
Basin E-1	0.40	0.90	5.5	6.21	2.2
Basin E-2	0.46	0.90	5.5	6.21	2.6
Basin E-3	0.29	0.90	7.5	5.29	1.4
Total	**1.15**				**6.19**

Table 2 Post Development Hydrologic Conditions:

Drainage Area	**A *(acres)***	**Weighted *(C)***	**Tc *(min.)***	**I(10) *(in./hr.)***	***Q(10) (cfs)***
Basin P-1	0.40	0.85	5.5	6.21	2.1
Basin P-2	0.46	0.85	5.5	6.21	2.4
Basin P-3	0.29	0.85	7.5	5.29	1.3
Total	**1.15**				**5.84**

The post development peak flow rates are anticipated to have a decrease of 0.35 cfs. This decrease in anticipated peak flow rates can be attributed to the addition of landscape and softscape areas around the new transit center and, layover areas which will incorporate pervious surfaces. Currently, all project areas are completely covered in impervious areas from buildings or surface parking. Additionally, because the overall project area is greater than 1 acre (even if split amongst 3 parcels), the project will be subject to the City and County of Honolulu's Rules Related to Stormwater Quality. The site meets both the size threshold (over 1 acre) and usage (heavy vehicle use) to warrant Category A or B1 requirements.

As Low Impact Development Best Management Practices (BMPs) are incorporated into the site design, revised hydrology calculations will be performed to ensure that the post development stormwater runoff rate leaving the site does not exceed pre-development rates and conditions. A drainage report will be prepared for the project as part of the permitting and approval process.

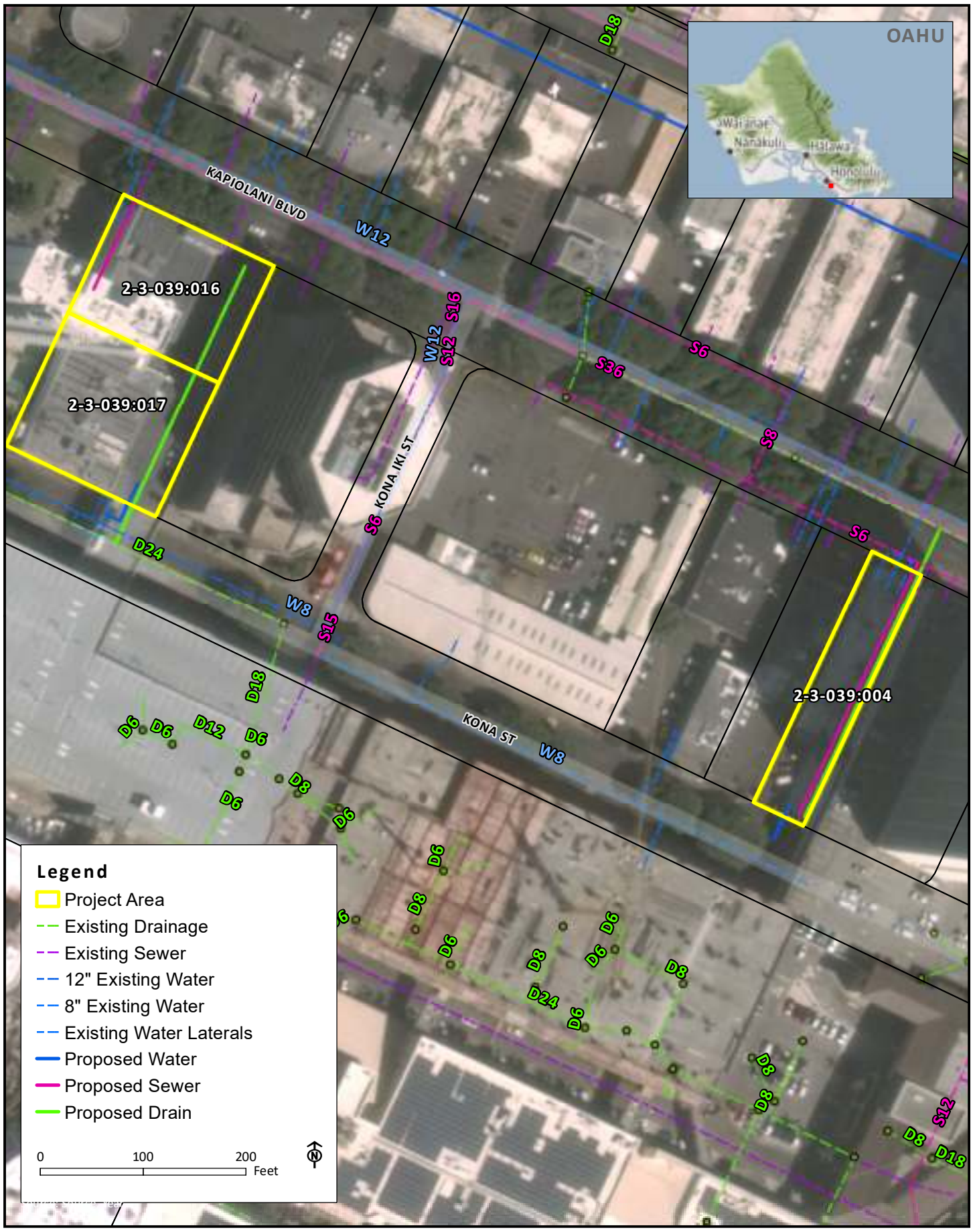

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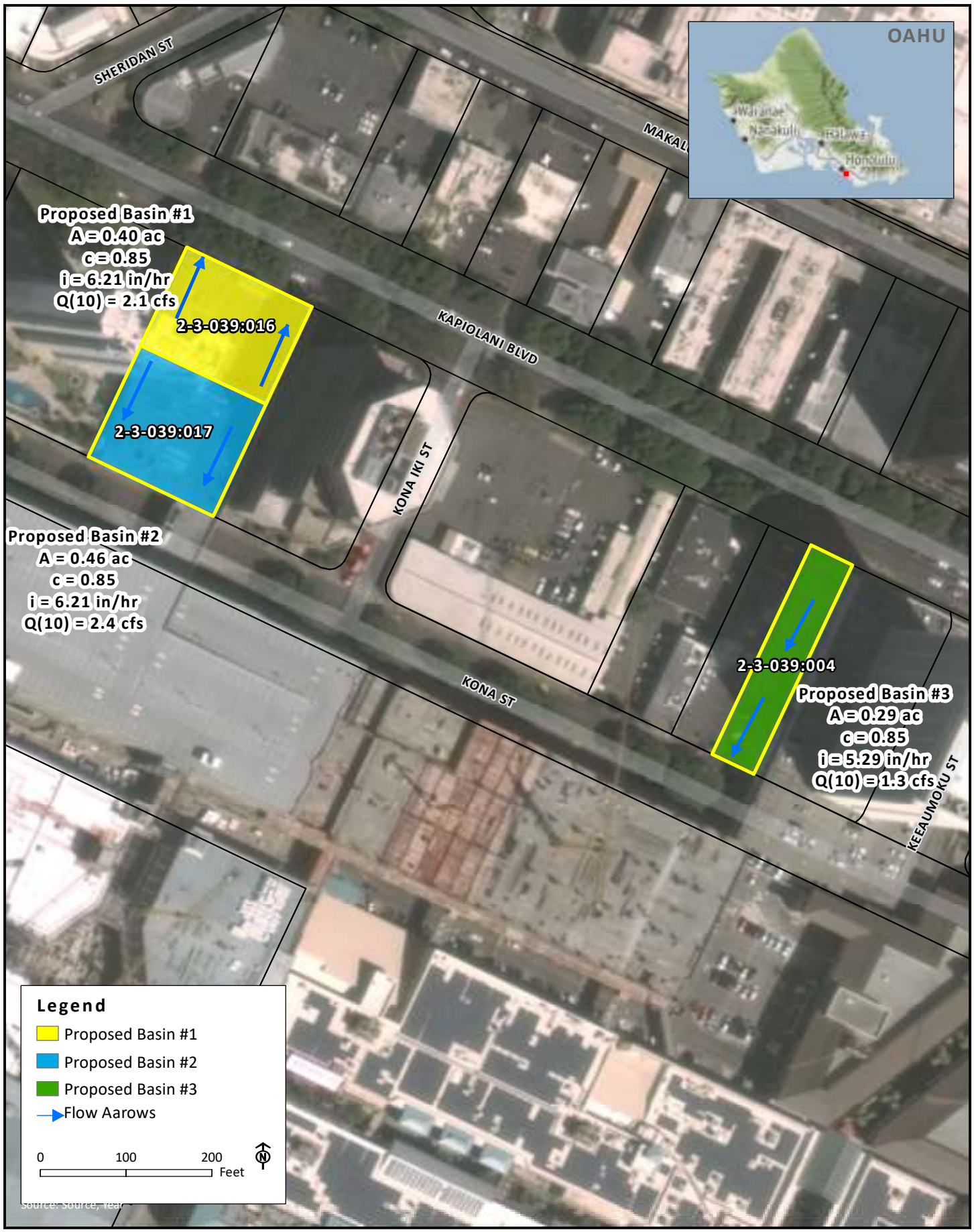
Figure 6 - Utility Plan



220051-01 DTS Ala Moana **Figure 07 - Hydrologic Map, Proposed Condtions**

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3.6.3 Low Impact Development

Low Impact Development Best Management Practices (BMPs) will be designed and installed to prioritize water infiltration, decrease runoff velocities, and increase the time of concentration which will lead to reduced peak runoff rates. Some localized or small detention systems, such as detention basins or underground chambers, may also be considered to reduce runoff rates leaving the project site if needed to maximize the development area.

Refer to Figure 7- Hydrology Map- Post Development (Conceptual Site) Condition

Bioretention basins or “rain gardens” are landscaped depressions or shallow basins used to treat on-site stormwater runoff. Pre-treatment is also highly recommended and should be provided when treating runoff from parking lots or roads. Inflow to vegetated bioretention basins may be piped or conveyed overland.

Biofiltration is the process of improving water quality by filtering water through biologically influenced media. They are a low energy treatment technology with the potential to provide both water quality and quantity benefits. The proposed Kalia Mobility Hub may utilize this technology to treat stormwater collections where retention and infiltration of stormwater is not feasible through bioretention.

3.7 Proposed Electrical Service

HECO may require new transformer infrastructure at the existing Kewalo Substation west of the project site on Kona Street. New transformers and 25 kV line infrastructure consisting of underground conduit duct banks and manholes and vaults would be required to be extended to the project site if capacity is not currently available. The addition of transformers at the substation would require Public Utility Commission (PUC) approval.

HECO also is unable to confirm if the electrical system will be able to support the proposed three pantograph bus chargers due to the uncertainty around reserved capacity and the demand requirement of the pantograph electric bus chargers. Due to the uncertain demand of the pantograph chargers, offsite improvements to the HECO Kewalo substation are possible to serve the project’s requirements.

An engineering service request will be submitted to evaluate the circuit capacity to confirm that power is available. The comfort station, retail, site lighting and office would have relatively low power demands. The proposed residential tower would have much higher demands.

Incorporating solar infrastructure to serve the project’s uses is likely not practical due to the limited size of the parcels and the electrical load it would require.

3.8 Gas Infrastructure

There are no anticipated uses as part of the project that will need gas service. Work will be careful to avoid existing pipelines.

4 CONCLUSION

The Kalia Mobility Hub will work in concert with the proposed Ala Moana Center (Kalia) Station to provide a seamless transit experience for Honolulu bus and rail riders. The transit center's adjacency to the station will allow riders to quickly make connections between TheBus and the rail along their route to their final destinations.

TheBus and TheHandi-Van will both be served by this transit center, allowing for multiple routes and Handi-Van drop-offs.

With the exception of the high-rise residential tower, new utility infrastructure including water and sewer utilities, grading and earthwork, and new pavements are not expected to have any major impact on existing conditions or existing infrastructure systems within or around the project site. Traffic patterns within Kapiolani Boulevard will largely remain the same, though the buses and passenger traffic along Kona Street will be rerouted and relocated to the transit center.

Existing easements are present within the project area and should be removed if needed or protected in place.

The project could also impact parts of Ala Moana Center, in particular the ground floor parking area. Additional bus stalls, retail areas, and parking may be added.

The project will also provide environmental benefits. Stormwater runoff generated on site will be directed to Low Impact Development features that will help treat and reduce stormwater runoff generated from the site. Landscaping will reduce impervious areas from existing conditions which will reduce runoff volumes that reach our storm drain systems and ultimately the ocean.

Finally, the Ala Moana Center Transit Center will provide a hub for multi-modal transportation users, connecting pedestrians, bicyclists, vehicle drop-offs, TheBus, TheHandi-Van, and the rail together in a seamless experience that will provide safe and clean transportation benefits and reduce the volume of personal vehicles on Oahu's roadways.

Prepared by Kimley-Horn and Associates, Inc. in Cooperation with the Oahu Metropolitan Planning Organization and the United States Department of Transportation.

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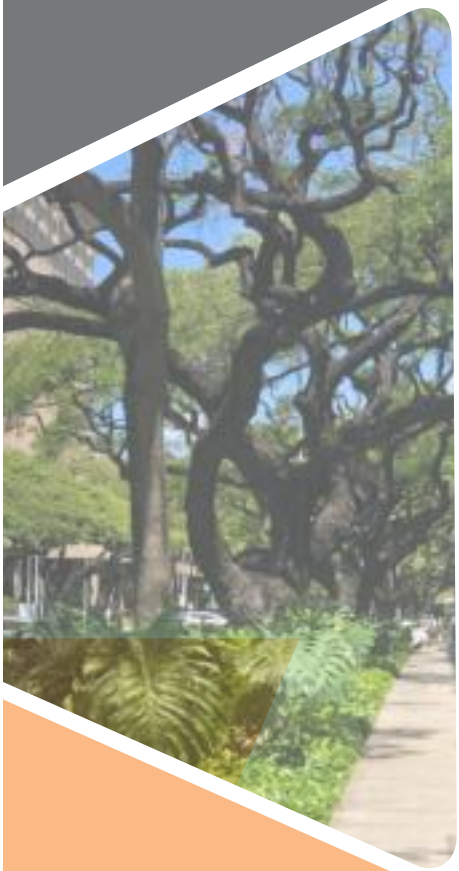

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